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THE
HEALTH OF BOLTON
1971

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH
ANNUAL REPORT OF PRINCIPAL SCHOOL MEDICAL OFFICER

COUNTY BOROUGH OF BOLTON



ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE YEAR ENDED

31st December, 1971

A. I. ROSS, M.D., D.P.H.,
MEDICAL OFFICER OF HEALTH
HEALTH DEPARTMENT, CIVIC CENTRE, BOLTON
Telephone No. 22311

HEALTH COMMITTEE, 1971-1972

The Mayor (Alderman A. Townend)

Chairman: Alderman Mrs. N. Vickers

Vice-Chairman: Councillor S. Cohen

Alderman E. G. Higson

Alderman W. Walsh

Councillor D. S. Clarke

Councillor T. Connor, J.P.

Councillor R. Johnson

Councillor J. Knight

Councillor H. J. Marsh

Councillor J. Parkinson

Councillor Mrs. D. Robinson

Co-opted Members:

Dr. B. Thornley

Mr. W. C. Moss

Mrs. M. J. Rothwell

INTRODUCTION

The shape of reorganised local government and the health service is now becoming clearer. Bolton is to be joined with surrounding districts and will have a population of 270,000. The area to be administered by the Area Health Authority will be the same as the local government district and corresponds to the hospital catchment area. One result of the change will be a split in the administration of the health and social services. The following services will be brought together under National Health Service administration:

the hospital and specialist services administered by the Regional Hospital Boards, Hospital Management Committees and Boards of Governors;

the family practitioner services administered by the Executive Councils;

the personal health services administered by local authorities through their health committees;

the school health service.

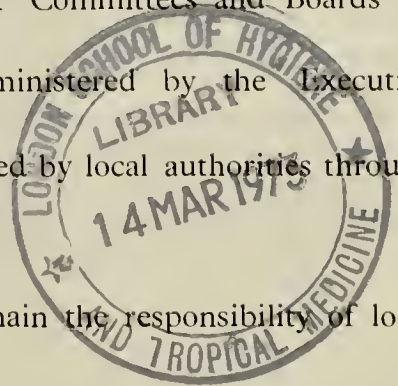
The environmental health service will remain the responsibility of local government.

A Working Party of officers from the Manchester Regional Hospital Board, hospital management committees, executive councils and the local health authorities in the Region have planned a very full programme of integration courses for those staff who will be joining the new service. Senior officers have also attended courses arranged nationally. Considerable effort will have to be made at all levels to ensure that there is full co-operation between the two services and that help and care of patients does not suffer.

The Authority's health centre programme continued with the opening of the Cannon Street Health Centre and the imminent opening of Deansgate Health Centre. At the end of the year plans were in hand for two more centres with three other possibles. Those working in the centres have found the buildings to their liking and the use by many different members of the local authority staff and general practitioners has helped effective co-operation. Patients have found most useful the pleasant surroundings and easy availability of different services and treatment.

It is unfortunately necessary to draw attention to the astonishingly high number of deaths from lung cancer - 137 in all, 106 males and 31 females. This is much higher than in previous years. It is a sad reflection on human behaviour that although the relationship between smoking and lung cancer has been known to smokers for many years, cigarette smoking continues.

The increasing number of old people continues to make more demands on the nursing, ambulance and chiropody services. Each year more ambulance staff have to be appointed. Presently we shall require additional vehicles and each year considerably more old people receive chiropody treatment in clinics and at home.



On January 1st, 1971, under the provisions of the Local Authority Social Services Act, 1970, the newly created Social Services Department became responsible for day care of pre-school children in day nurseries or by child minders and the supervision of these minders, the provision of mother and baby homes, the home help service, convalescence and the mental health service of the Health Department. On April 1st, 1971, the Education Service became responsible for education of mentally handicapped children. The Firwood Junior Training Centre was transferred to the Education Department and the supervision of the children attending what is now a school will be shared between the Education and Social Services Department.

I should like to take this opportunity of thanking all the staff of the three sections of the department transferred for the most excellent work they have done over the years.

The staff of the Health Department continue to receive great help from local authority officers and from those in other branches of the health service. The continued interest and helpfulness of the Chairman and members of the Committee are very much appreciated.

A handwritten signature in cursive script, appearing to read 'A. Ross.'.

Medical Officer of Health.

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PRINCIPAL STAFF OF THE HEALTH DEPARTMENT

at 31st December, 1971

MEDICAL STAFF

Medical Officer of Health	A. I. Ross, M.D., D.P.H.
Deputy Medical Officer of Health ..	J. S. Farries, M.R.C.S., L.R.C.P., D.A., D.(Obst.) R.C.O.G., D.P.H.
Senior Medical Officer	Audrey Seddon, M.B., Ch.B., D.(Obst.) R.C.O.G.
Medical Officers and School Medical Officers	Mavis J. Allanson, M.B., Ch.B., D.(Obst.) R.C.O.G. E. Losonczi, M.D., D.P.H. (resigned 15.8.71) Mira Parikh, M.B.S., D.(Obst.) R.C.O.G. (commenced 13.12.71) Dorothy M. Paterson, M.B., Ch.B. B.A.O. (Cork) K. K. Thaker, M.B.B.S., D.(Obst.) R.C.O.G. (commenced 16.8.71, resigned 30.11.71) J. Tudor, L.M.S.S.A.
Principal School Dental Officer ..	S. J. Bray, L.D.S.

COMMUNITY NURSING STAFF

Director of Nursing Services	Miss E. M. Richardson, S.R.N., S.C.M., H.V., and Q.N. Certs., D.N. (London), Nursing Admin. (Public Health) Cert.
Area Nursing Officer (North)	Mrs. E. Gallaher, S.R.N., S.C.M., H.V. and Q.N. Certs.
Area Nursing Officer (South)	Miss A. M. Fraser, S.R.N., S.C.M., H.V. Cert.

PUBLIC HEALTH INSPECTORS

Chief Public Health Inspector	T. Williams, F.R.S.H., M.R.Inst. P.H.H., M.A.P.H.I.
Deputy Chief Public Health Inspector	N. Ryce, M.R.S.H., M.A.P.H.I.

CLERICAL STAFF

Senior Administrator	W. Greenhalgh
Senior Administrative Assistant ..	H. Staley, D.M.A.

AMBULANCE SERVICE

Superintendent	J. Stroud, F.I.A.O.
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ANALYST

Borough Analyst	P. Morries, B.Sc., F.R.I.C., F.I.F.Sc.T.
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BATHS

Manager	C. G. Duce, T.I.B.M.
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PART 1

STATISTICAL INFORMATION

Summary of Statistics

Vital Statistics

SUMMARY OF STATISTICS, 1970

COUNTY BOROUGH OF BOLTON

Position	Lat. 53° 35' N. Long, 2° 27' W.
Elevation above sea level	230 ft. to 1,450 ft.
Geological Formation	Boulder Clay and Sand over Coal Measures
Rainfall (Av. 1887-1971: 61·67")	74·1"
Area in Acres (Land and Inland Water)	15,279
Population (Census 1921)	178,683
„ (Census 1931)	177,250
„ (Census 1951)	167,162
„ (Census 1961)	160,740
„ (Census 1971)	153,977
New permanent houses, including flats, certified	732
Existing buildings altered to provide dwelling accommodation	Nil
Estimated number of houses in the Borough	56,920
Rateable value at 1st April, 1971	£5,839,830
Rate at 1p in the £ estimated to produce (1971-72)	£55,550
Live births	2,675
Live births per 1,000 population (Corrected)	18·76
Stillbirths	37
Stillbirth rate per 1,000 live and stillbirths	13·64
Total live and stillbirths	2,712
Infant Deaths	71
Infant mortality rate per 1,000 live births total	26·54
Infant mortality rate per 1,000 live births—legitimate	23·84
Infant mortality rate per 1,000 live births—illegitimate	46·01
Neo-natal mortality rate per 1,000 live births	16·45
Early Neo-natal mortality rate (under one week)	14·20
Illegitimate live births per cent of total live births	12·18
Maternal deaths (including abortion)	Nil
Maternal mortality rate per 1,000 live and stillbirths	Nil
Deaths	2,129
*Death rate (Corrected)	14·40
*Average Death Rate (1962-1971)	14·37
*Heart and Circulation Death Rate	9·73
*Cancer Death Rate	2·88
*Death Rate from diseases of the Respiratory System	1·88
*Pulmonary Tuberculosis Death Rate	0·03
Diarrhoea Death Rate (Deaths under two years per 1,000 live births)	1·49

ENGLAND AND WALES:

*Birth Rate	16·0
Stillbirth Rate (per 1,000 total births)	12·0
*Death Rate	11·6
Infant Mortality (Deaths under one year per 1,000 live births)	18·0

*Per thousand of population

VITAL STATISTICS

Births:

There were 2,675 live births to Bolton residents, 1,430 males and 1,245 females. The live birth rate (corrected) per 1,000 of the population was 18.70.

The number of births and the birth rate increased slightly compared with the previous year. The national birth rate is the same as in 1970 and is still well below that of Bolton, being 16.00. The number and percentage of illegitimate births was the highest ever recorded in the town.

The following table shows the pattern of the birth figures in the last ten years.

Year	Population	No. of Live Births	Live Birth Rate per 1,000 population (Corrected)
1962	160,650	2,767	17.22
1963	159,780	2,701	18.25
1964	159,190	2,775	18.82
1965	157,990	2,785	19.04
1966	157,200	2,685	18.44
1967	156,400	2,800	19.34
1968	153,700	2,711	19.05
1969	152,500	2,701	19.13
1970	152,010	2,622	18.60
1971	154,360	2,675	18.70

The following table shows the percentage of illegitimate births in Bolton for the last ten years and the figure for the rest of the country.

Year	Percentage of live births who are illegitimate	National percentage of illegitimate births
1962	7.05	6.61
1963	7.70	6.92
1964	7.96	7.23
1965	8.22	7.68
1966	10.75	7.89
1967	9.60	8.40
1968	11.10	8.52
1969	11.03	8.40
1970	10.83	8.00
1971	12.18	8.00

LIVE BIRTHS IN INSTITUTIONS	NUMBER	PERCENTAGE OF TOTAL LIVE BIRTHS
Bolton District General Hospital	1,665	
Haslam Maternity Home	347	
Havercroft Maternity Home	167	
Heaton Grange Maternity Home	367	
Institutions and Homes outside Bolton	33	
TOTAL	2,579	96%
LIVE BIRTHS AT HOME	107	4%

The number of births at home and in hospital is dealt with more fully in the Midwifery part of the report. The figures given above (2,687) do not coincide exactly with that of the Registrar General's Office due to the difference in the notification of births (within 36 hours of birth) and registration of births (within 6 weeks of birth).

There were 256 premature live births.

The percentage of deliveries taking place in hospitals and maternity homes continues to rise being 96% in 1971 compared with 94.5% in 1970.

Stillbirths:

The number of stillbirths was 37, giving a stillbirth rate of 13.64 per 1,000 live and stillbirths.

The causes of the 37 stillbirths are given in the following table:

Cause of Stillbirth	Number
Congenital malformation	2
Intra-uterine anoxia	6
Prematurity	1
Placental insufficiency	2
Haemorrhage without mention of placental condition ..	1
Hydrocephalus	1
Anencephaly	4
Toxaemia	2
Other ill-defined causes	18
TOTAL ..	37

Total live and stillbirths:

The total number of live and stillbirths was 2,712.

Deaths:

There were 2,129 deaths (1,107 males and 1,022 females) giving a corrected death rate of 14.4 per 1,000 of the population.

There were 802 Bolton residents who died outside the Borough; of these 694 died in Bolton District General Hospital or Townleys Branch Hospital.

Non-residents who died in the area numbered 233.

Summary of the Principal Causes of Death, 1971

Causes of Death	No. of Deaths	Males	Fe- males	0-	1-	5-	15-	25-	35-	45-	55-	65-	75-
Tuberculosis, Respiratory	1	1	-	-	-	-	-	-	-	-	-	-	1
Other	6	2	4	-	-	-	1	-	-	2	-	3	-
Syphilitic disease	-	-	-	-	-	-	-	-	-	-	-	-	-
Diphtheria	-	-	-	-	-	-	-	-	-	-	-	-	-
Whooping Cough	-	-	-	-	-	-	-	-	-	-	-	-	-
Meningococcal Infections	4	3	1	1	3	-	-	-	-	-	-	-	-
Acute Poliomyelitis	-	-	-	-	-	-	-	-	-	-	-	-	-
Measles	-	-	-	-	-	-	-	-	-	-	-	-	-
Other infective and parasitic diseases	6	4	2	1	4	-	-	-	-	1	-	-	-
Malignant Neoplasm:													
Stomach	56	27	29	-	-	-	-	-	1	4	18	19	14
Lung and Bronchus	137	106	31	-	-	-	-	-	6	20	33	54	24
Breast	34	1	33	-	-	-	-	-	-	4	13	9	8
Uterus	18	-	18	-	-	-	-	-	2	5	3	2	6
Other malignant and lymphatic neoplasms	194	106	88	1	-	2	2	1	3	23	38	65	59
Leukaemia and Aleukaemia	9	5	4	-	-	-	-	-	-	-	-	4	5
Diabetes	17	3	14	-	-	-	-	1	-	-	3	6	7
Vascular lesions of nervous system	293	124	169	-	-	-	-	1	4	7	39	82	160
Coronary Artery disease and angina	496	296	200	-	-	-	-	1	11	37	111	156	180
Hypertension with heart disease	38	15	23	-	-	-	-	1	-	3	11	9	14
Other heart disease	225	98	127	-	-	-	-	-	6	17	22	54	126
Influenza	2	1	1	-	-	-	-	-	-	-	-	-	1
Pneumonia	156	87	69	9	2	-	2	1	4	9	10	48	71
Bronchitis	111	72	39	-	-	-	-	-	-	6	21	44	40
Other diseases of respiratory system	18	12	6	-	-	-	-	-	1	1	-	5	11
Ulcers of stomach and duodenum	12	6	6	-	-	-	-	-	-	-	4	2	6
Gastritis, enteritis and diarrhoea	5	2	3	2	3	-	-	-	-	-	-	-	-
Nephritis and Nephrosis	10	8	2	-	-	-	-	-	1	2	1	2	4
Hyperplasia of Prostate	6	6	-	-	-	-	-	-	-	-	-	1	5
Pregnancy, childbirth and abortion	-	-	-	-	-	-	-	-	-	-	-	-	-
Congenital malformations	12	6	6	9	-	-	-	-	1	1	-	1	-
Other defined and ill-defined diseases	186	77	109	45	1	1	2	5	8	6	14	38	66
Motor vehicle accidents	22	16	6	1	2	3	5	2	2	2	-	4	1
Suicide	12	5	7	-	-	-	1	2	-	2	2	3	2
All other accidents	43	18	25	2	3	2	3	2	1	1	5	6	18
Homicide and Operations of War	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS	2,129	1,107	1,022	71	18	8	16	17	51	153	348	618	829

Deaths from Puerperal Causes:

There were no deaths from puerperal causes in 1971.

Infant Mortality:

There were 71 deaths of infants under one year - an infant mortality rate of 26.54 per 1,000 live births.

Cause of Death	Age at Death					Total for each cause
	Under 4 weeks	4 weeks to 3 mths	3 to 6 months	6 to 9 months	9 to 12 months	
Prematurity	19	—	—	—	—	19
Congenital malformations	4	2	1	—	—	7
Pneumonia	2	4	2	1	—	9
Post-natal asphyxia and Atelectasis	5	2	—	—	—	7
Birth Injury	2	—	—	—	—	2
Other Causes	12	3	8	2	2	27
TOTALS	44	11	11	3	2	71

Deaths under Four Weeks:

There were 44 deaths of infants under four weeks giving a neo-natal mortality rate of 16.45 per 1,000 live births. The rate for England and Wales was 12.00.

The following table shows the ages at which death took place.

Cause of Death	0-7 days	8-14 days	15-21 days	22-28 days	Total
Prematurity	19	—	—	—	19
Congenital malformations	2	2	—	—	4
Pneumonia	2	—	—	—	2
Post-natal asphyxia and Atelectasis ..	4	—	1	—	5
Birth Injury	2	—	—	—	2
Other Causes	11	—	1	—	12
TOTALS	40	2	2	—	44

Perinatal Mortality:

The perinatal mortality rate is the number of stillbirths added to the number of infant deaths during the first week of life, expressed as a rate per thousand of total births, both live and still. In 1971 the perinatal mortality rate in Bolton was 27.76.

The following table shows the infant mortality rate, neo-natal mortality rate, stillbirth rate, perinatal death rate and the death rate of infants aged one week but under one year for the last ten years.

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Infant Mortality Rate ..	24.2	32.6	19.1	20.5	24.6	23.9	28.04	23.7	22.12	26.54
Neo-natal Mortality Rate ..	18.1	19.6	10.8	14.0	12.7	15.7	18.44	14.8	12.20	16.45
Stillbirth Rate	19.1	16.4	15.3	17.3	16.1	15.1	17.05	14.2	20.91	13.64
Perinatal Death Rate	34.0	32.4	24.8	29.5	27.1	28.1	33.12	23.0	31.74	27.76
Deaths of infants aged 1 week but under 1 year per 1,000 total live births	8.9	16.0	9.2	8.1	13.2	10.7	11.5	14.8	11.02	11.58

General Discussion - (Infant Mortaility and Stillbirths)

With 71 children dying in the first year of life the infant mortality rate was higher than in the two previous years with 58 dying in 1970 and 64 in 1969. In contrast with previous years only 5 of these infants were from immigrant families and this is approximately in the same proportion as for the rest of the population. Most of the increase in 1971 was in the group of babies aged less than 4 weeks and in these children environmental factors are of less importance.

Thirty seven stillbirths were recorded in Bolton and this is the lowest number which has ever occurred in one year in the town. Unfortunately, 40 infants died in the first week of life and this meant that the perinatal mortality, although lower than in the previous year, was higher than in four years of the last decade.

The percentage of children born at home is as follows:

1962	20%
1963	19%
1964	18%
1965	18%
1966	13%
1967	11%
1968	8%
1969	7%
1970	6%
1971	4%

Deaths from Cancer

Localisation of Disease, Number of Deaths and Rate Per Cent of Total Deaths annually for the past ten years

Site	1962		1963		1964		1965		1966		1967		1968		1969		1970		1971	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Stomach . . .	73	3.30	72	3.23	56	2.70	61	2.94	63	2.87	54	2.72	41	1.93	53	2.34	60	2.82	56	2.63
Lung & Bronchus	98	4.43	90	4.04	109	5.26	110	5.27	105	4.80	87	4.39	96	4.51	96	4.33	105	4.94	137	6.45
Breast . . .	40	1.81	31	1.39	32	1.54	22	1.05	45	2.06	37	1.86	21	1.42	44	1.98	37	1.74	34	1.59
Uterus . . .	21	0.95	6	0.27	20	0.97	22	1.05	15	0.69	16	0.81	6	0.28	22	0.99	14	0.65	18	0.85
Other Sites . . .	172	7.77	167	7.50	178	8.59	167	8.0	194	8.86	176	8.88	193	9.08	93	4.19	162	7.63	104	4.88
TOTAL DEATHS FROM CANCER . . .	404	18.26	366	16.43	395	19.06	382	18.30	422	19.27	370	18.66	367	17.27	308	13.89	378	17.84	349	16.39
TOTAL DEATHS: (All causes) . .		2,122		2,227		2,072		2,088		2,190		1,981		2,125		2,216		2,122		2,129

Deaths from Lung Cancer:

The number of deaths from lung cancer was 137, which is the highest figure ever recorded in Bolton, the previous biggest total being in 1965 when 110 people died from the disease.

The following table shows the age and sex of the people who died from lung cancer in 1971.

Age Group	Males	Females	Total
35 - 44	4	2	6
45 - 54	15	5	20
55 - 64	24	9	33
65 - 74	45	9	54
75 and over	18	6	24
TOTALS	106	31	137

The increase is particularly noteworthy in females. Deaths from lung cancer in women for the previous ten years are as follows:

1961	8
1962	13
1963	11
1964	13
1965	19
1966	19
1967	7
1968	21
1969	12
1970	9
1971	31

It will be expected that the increase in deaths in females will continue to rise, possibly for the next twenty years, unless there is a sudden and unexpected decrease in the amount of cigarette smoking. Tobacco consumption by males started to increase considerably in the First World war and it is probable that the death rate may be reaching a plateau as subsequent generations have continued to smoke cigarettes since they left school. Smoking by females increased sharply in the Second World War and unfortunately, the full effects of this have not yet been encountered. During the year 39 women died from bronchitis and 200 from coronary artery disease, both are conditions in which the cigarette is of aetiological significance.

Deaths from Coronary Artery Disease:

The following table shows the deaths from coronary artery disease in the last ten years.

Year	Under 65	Total Deaths
1962	138	386
1963	146	407
1964	135	396
1965	129	398
1966	138	388
1967	130	393
1968	141	477
1969	151	504
1970	143	496
1971	160	496

Though the total deaths from the disease are the same as the previous year the number under the age of 65 years is the highest ever recorded in the town. The factors associated with coronary disease such as cigarette smoking, obesity and lack of exercise are by now well known to the public and in theory would allow scope for preventable action. In actual fact the mode of living in western countries would suggest that these deaths, particularly in middle-aged men, will increase considerably in the future.

One of the causes of the recent rise in deaths is thought to be lack of exercise both at work and in getting to work. The projected increase in car ownership can only make the picture of the future worse. Not only does the motor car contribute to the slaughter on the road and pollution of the atmosphere but, by reducing exercise and causing stressful experiences during driving, it makes its fair contribution to coronary artery disease. For those who would like to indulge in the exercise of peaceful walks in the countryside, the tranquility is shattered by the noise of the internal combustion engine. The motor car must be a close second to the cigarette as a cause of death which should be preventable.

Fatal Accidents in the Home:

There were 26 fatal accidents in the home during 1971 and this is equal to the comparative low figures found in 1969 and 1967. The Bolton Home Safety Committee has been in existence for six years and during this period the figures are lower than in previous years in spite of the fact that there has been an increase in the number of older people in the town who are more liable to have home accidents.

The number of fatal accidents in the home since 1962 are given below :

1962	43
1963	50
1964	37
1965	34
1966	29
1967	26
1968	28
1969	26
1970	31
1971	26

The following table shows the distribution of accidental deaths in the home according to the age, sex and the nature of the accident.

Cause of Death	Age Group								Totals
	15 - 44		45 - 69		70 - 79		80 & over		
	M	F	M	F	M	F	M	F	
Falls – Fractured Femur ..	–	–	–	–	1	4	1	7	13
– Other	–	–	–	4	1	–	–	3	8
Asphyxia	–	–	–	1	–	–	–	1	2
Barbiturate Poisoning	–	–	–	–	1	–	–	–	1
Electrocution	1	–	–	–	–	–	–	–	1
Other Poisoning	1	–	–	–	–	–	–	–	1
TOTALS	2	–	–	5	3	4	1	11	26

Suicide:

There were 12 suicides in 1971 which is the second lowest figure since the war with only 1970 showing a lower number of deaths.

The number of suicides since 1962 are given below:

1962	22
1963	13
1964	25
1965	20
1966	24
1967	15
1968	28
1969	13
1970	10
1971	12

The following table shows the distribution of suicide according to age, sex and method of suicide:

Cause of Death	Age Group						Total
	15-44		45-64		65 and over		
	Male	Female	Male	Female	Male	Female	
Barbiturate Poisoning ..	-	1	-	-	-	1	2
Ashpyxia	-	1	1	1	-	1	4
Drowning	-	-	-	1	-	1	2
Carbon Monoxide Poisoning	-	-	-	-	1	-	1
Triptizol Poisoning	-	-	-	-	1	-	1
Other causes	1	-	1	-	-	-	2
TOTALS	1	2	2	2	2	3	12

The continued low incidence of deaths may indicate better resusitative measures for attempted suicides, more effective treatment for the depression which often precedes suicide and the work of voluntary bodies such as the “Samaritans”.

PART II

LOCAL HEALTH SERVICES

**Co-ordination of the Health Department, Hospital and Family
Doctor Services**

Health Centres

Care of Mothers and Young Children

**Community Nursing Services
Midwifery**

Health Visiting

Home Nursing

Immunisation and Vaccination

Ambulance

Prevention of Illness, Care and After-Care

Mental Health

CO-ORDINATION OF THE HEALTH DEPARTMENT, HOSPITAL AND FAMILY DOCTOR SERVICES

Unification of the three branches of the health service will take place in 1974 and in the meanwhile, every effort is being made to co-ordinate activities, the aim being to provide adequate facilities whilst avoiding duplication. This is more easily accomplished where workers are based in the same premises and the health centres provide this type of accommodation.

Co-ordination with Family Doctor:

The health visitors are attached to general practices and help is given for those family doctors who hold child health clinics in their own surgeries. The district nurses are also attached to general practices and the midwives attend surgeries to assist with ante-natal clinics.

Co-ordination with Hospital Services:

GERIATRICS:

A health visitor and a state registered nurse work in a full-time capacity with the Consultant Geriatrician. The health visitor keeps the patients on the waiting list for admission under review in case there are any changes in their circumstances. She also makes sure that full services are available for those who do not need hospitalisation or who have been discharged from hospital.

MENTAL ILLNESS:

The Consultant in Mental Subnormality at Brockhall Hospital attends the Civic Centre once monthly when he sees cases referred by general practitioners and local authority medical officers.

When a child is to be seen by the Consultant Child Psychiatrist at the Lady Tong Clinic at the Bolton District General Hospital, the school medical officer attends to take part in the discussion about possible treatment and suitable school placement for the child.

PAEDIATRICS:

A weekly clinic is held at the Deansgate Health Centre by the Consultant Paediatrician with the assistance of one of the medical officers and a health visitor. Medical officers and a health visitor also attend the Paediatric Out-Patients Department at the Bolton District General Hospital. A health visitor also takes part in a ward round and this enables her to give advice about any social problems that may be present. These arrangements allow full assessment to take place of handicapped children so that their needs, such as appropriate education, can be met. Reports of the treatment of children by the hospital are passed to the Health Department.

OBSTETRICS:

Many midwifery patients are discharged from hospital before the usual eight to ten days of the puerperium have elapsed. Patients who are selected for this early discharge are cared for by the local authority midwives who visit before delivery to ascertain that home conditions are suitable for this to take place.

SURGERY:

A district nurse is seconded to the Bolton Royal Infirmary and Bolton District General Hospital to help in the assessment of those patients who still require some nursing treatment but do not need full hospitalisation. These patients can often be discharged earlier than usual and free urgently required beds for other cases. The nurse passes information about treatment and nursing still required to the other home nurses.

SCHOOL HEALTH SERVICE CLINICS:

An Ear, Nose and Throat Consultant, an Ophthalmic Consultant and a Consultant Child Psychiatrist undertake clinics for the School Health Service.

The Medical Officer of Health is a member of the Bolton & District Hospital Management Committee and its Medical Advisory Committee, the Bolton Executive Council, the Local Medical Committee, the Local Obstetric Committee, the Ambulance Liaison Committee, the Geriatric Group and the Maternity Liaison Committee.

HEALTH CENTRES

Two health centres, Halliwell and Astley Bridge, were in use at the beginning of the year and provided accommodation for nine general practitioners and local authority health services.

Cannon Street Health Centre:

This was opened in September, 1971, and supplied accommodation for six general practitioners and was also used for some of the local authority services, including child welfare and chiropody.

Deansgate Health Centre:

Towards the end of the year work on the centre was nearly complete and it was due to open in January, 1972. Six general practitioners would have accommodation in the centre and all clinical work from the Civic Centre and services in the Robert Galloway Clinic would be transferred to Deansgate Health Centre.

Tonge Moor Health Centre:

This is to be built at the junction of Ainsworth Lane and Thicketford Road and is expected to be ready in 1974. It will provide premises for five general practitioners and some local authority services.

A further health centre is planned for the eastern part of the town but the actual site has not been finally decided. When it is opened it will provide surgery accommodation for a further six general practitioners. This will mean that by 1975 thirty two doctors will be practising from health centres with more than a third of the town's population on their lists.

CARE OF MOTHERS AND YOUNG CHILDREN

Child Health Centres:

The Child Health clinics continue to serve a very useful purpose in spite of the unsuitability of many of the improvised premises where child health clinics are held.

The hoped for development of more baby clinics being held in general practitioner surgeries has not yet materialised, but the ones already functioning are extremely popular with both staff and patients. The education of the mothers into accepting the child health clinic as a place for individual counselling is now part of the health visitor's task and is rapidly replacing the old ritual of weekly weighing of the baby.

Two departmental doctors are already carrying out developmental tests at some of the health centres in conjunction with an appointment system. It is hoped this aspect of the work will develop further in the coming year.

There were several changes in the places where clinics are held. These included the opening of a new health centre in September, 1971. The clinic formerly held at Daubhill Methodist Sunday School was replaced by the child health clinic at the new Cannon Street Health Centre from September, 1971.

The clinic held at Chalfont Street Independent Methodist Church was transferred to the Halliwell Health Centre from August, 1971, and the clinic held in St. Augustine's School was transferred to more suitable accommodation at the Eldon Street Social Centre.

A summary of the work carried out is as follows:

	Number of Sessions				Total attendances				
1969	846	26,639
1970	768	26,392
1971	773	26,284

Details of different ages are shown in the following table:

Attendances at Child Health Clinics

Age of Child	First Attendance	Subsequent Attendances	Seen by Doctor at Child Health Centre
Born 1971	2,271	10,709	6,947
Born 1970	833	9,112	6,257
Born 1966/70 ..	473	2,886	2,303
TOTALS ..	3,577	22,707	15,507

Even though the total attendances at Child Health Clinics remains much the same, the number of children seen by department doctors continues to increase (1,390 more seen in 1971). This indicates that mothers are using the Child Health Clinics more for advice and not just for weighing their babies and for the buying of baby foods. The numbers referred for further investigations have again increased, in particular those referred to the paediatrician.

Details of children under 5 years referred to consultants:

	1970	1971
Referred to Ophthalmic Surgeon	15	16
„ „ Paediatrician	41	55
„ „ Orthopaedic Surgeon	12	7
„ „ General Surgeon	5	13
„ „ E.N.T. Surgeon	2	2
„ „ Dermatologist	1	1
„ „ Psychiatrist	—	3
	—	—
TOTAL	76	97
	—	—

VOLUNTARY WORKERS:

During the year 60 voluntary workers helped regularly at the Child Health Clinics with duties that included sale of food, reception, baby weighing and generally making mothers welcome.

These voluntary workers give generously of their time to help the staff in the running of the clinics, but it was felt that they had no satisfactory means of making known their points of view and ideas. Therefore, the possibility of appointing a co-ordinator who would be able to unite the group and also maintain a panel of workers to substitute for regular helpers when they are sick or on holiday was discussed.

All voluntary workers were invited to a meeting prior to the Reception for voluntary helpers given by the Health Committee in December, 1971, and this proposition was discussed and accepted.

Miss A. Miller, formerly Principal of Clarence Street Women's Institute, was appointed to act as the co-ordinator. Miss Miller intends to acquaint herself personally with all the voluntary workers at the Child Health Clinics in the coming months and will advise them of the procedure for contacting her when the need arises.

With the many developments at present taking place in the health and social services it is likely that new opportunities for voluntary service will arise in clinics and centres.

Paediatric Clinic:

The clinic is held once a week, with the consultant paediatrician, a medical officer and a health visitor in attendance.

This year only one visit was made to the Firwood School to see the mentally retarded children in their environment, but many have been seen at the clinic.

The objective of the clinic is to make sure that the handicapped child is receiving all possible care and assistance. The parents seem to appreciate the opportunity of talking about their child's problems away from the hospital atmosphere.

As approximately only 10 cases are seen at the clinic each week, ample opportunity is provided to discuss the total problems of the handicapped child.

Of the 189 children attending the clinic, 80 were new cases and 109 were follow-ups.

No. of clinics held	39
No. of attendances	327
No. of children attending	189
No. discharged	58
No. transferred to B.D.G.H.	3
No. transferred to Child Guidance	1
Died	2

CATEGORIES OF CHILDREN ATTENDING CLINIC:

Orthopaedic	14
Muscular dystrophy	7
Mentally retarded	33
Retarded development	19
Hypotonia	13
Speech	18
Epileptic	19
Vision	1
Renal disease	1
Hearing defects	15
Spina bifida	2
Cerebral palsy	5
Neurological	1
Cretin	3
Digestive	3
Hydrocephalic	7
Phenylketonuria	1
Gargoyle	1
Miscellaneous	26
TOTAL							189

HANDICAPPED REGISTER OF PRE-SCHOOL CHILDREN:

The handicapped register has been maintained in the same form as in previous years. It combines a record of children who have a handicap which may necessitate them needing special education and those who have a defect at the moment. The flexibility of the system safeguards against too early labelling of children but still allows observation of those who may require help.

Cases on the combined Handicap and Defect Register:

	1969	1970	1971
Children with one or more defect	219	366	457
Children with one or more handicap	236	257	295
Total	455	623	752

Children with a Handicapping Condition

Year	Cases on the register at the beginning of the year	New cases	Total	Cases deleted	Cases on the register at the end of the year
1969	142	94	236	73	163
1970	163	94	257	55	202
1971	202	82	284	47	237

An analysis of the 284 handicapped children is shown in the following table:

Category of Handicap	Cases on Handicapped Register during 1971			Action taken on cases on Register of Children who require special Education or Instit. Care			Cases deleted from Handicapped Register during 1971				Cases on Register at 31.12.71
	Cases on Register at 31.12.70	New cases entered in register during 1971	Total	Being assessed	Assessed and on waiting list	Attending special schools and under 5 years of age	Reached school age not requiring special education	Removed from area	Died	Total	
Asthma	26	5	31				6	2	-	8	23
Blood diseases	1	1	2								2
Cardiac	29	6	35				6			6	29
Cerebral Palsy	9	4	13			2		1	1	2	11
Cleft palate	6		6				2			3	3
Cleft palate and hare lip	8	3	11				2	1		3	8
Cretin and dwarf											
Deafness	15	1	16			4	2			2	16
Epilepsy and Convulsions	10	6	16								14
Fibro-cystic disease of the pancreas	2		2								
Hydrocephalus and Spina Bifida	19	8	27			3	1	1	2	4	2
Miscellaneous	11	17	28				4	1	1	6	23
Mentally Retarded	17	8	25			4	5	2	2	9	22
Mongols	13	4	17					1	1	2	16
Orthopaedic	22	3	25				1			1	15
Speech defects	2	16	18				1			1	24
Vision	12		12			1				1	17
TOTAL	202	82	284			14	30	9	8	47	237

CHILDREN AT RISK WHO DEVELOPED A HANDICAP:

Of the 82 new cases entered on the register in 1971, 57 were considered to be "at risk" at birth.

An analysis of the 57 "at risk" children is shown in the following table:

"At risk" factor	Handicap	No.	Additional "at risk" factors
Congenital defect at birth	Cardiac	3	
	Mongol	4	Includes 4 with other "at risk" factors listed below.
	Hydrocephalus and spina bifida	7	Includes 3 with other "at risk" factors listed below.
	Spina bifida	1	Also post mature
	Orthopaedic defect of hand	1	Also premature and hypercalcaemic
	Pierre Robin syndrome	3	Includes 2 with other "at risk" factors listed below.
Toxaemia of pregnancy	Retarded	1	
Prematurity	Dyslalia	1	
	Post polio limp, right leg	1	
	Transient diabetes	1	Also Rh negative
	Deaf	1	
	Hydrocephalus	1	
	Orthopaedic defect of hand	1	
Forceps delivery	Hydrocephalus and spina bifida	2	
Caesarian section	Dyslalia	1	
Other obstetric factors	Down's syndrome	1	Also Rh negative
	Dyslalia	1	
	Medulla blastoma	1	
	Pseudo muscular dystrophy	1	Also family history of disease
	Osteomyelitis R. humerus	1	
	Slow progress	1	
Rhesus factor	Epilepsy	1	
	Hare-lip/cleft palate	1	
	Transient diabetes	1	
	Down's syndrome	1	
Health of mother	Typical baby of diabetic mother	1	Diabetic mother
	Speech delay	1	Psychiatric mother
	Mongol	1	Mother had hypertension
	Epilepsy	1	Epileptic mother
Family history	Muscular dystrophy	3	
	Hare lip/cleft palate	1	
	Asthma	4	
	Potential haemophilia	1	
	Epilepsy	1	
Post mature	Speech delay	1	
	Hare lip/cleft palate	1	
	Spina bifida	1	
	Mongol	1	
	TOTAL	57	

The second group of children with defects requiring observation entered on the register during the year included:

	1969	1970	1971
Talipes	9	9	3
Congenital dislocation of hip (requiring splints)	9	43	27
Gastro-intestinal disorders (including coeliac disease, gastric allergy and malabsorption syndrome)	6	14	14
Metabolic disorder	—	—	4
A miscellaneous group comprising:			
Renal rickets	—	—	1
Rickets	—	—	10
Rickets with active tuberculosis.. ..	—	—	1
Children with clinically bowed legs who subsequently were found not to have rickets	—	—	8
Nephritis - nephrectomy	—	—	1
Atresia of ilium	—	—	1

DEATHS OF CHILDREN WITH DEFECTS OR HANDICAPS:

There was one death during 1971 of a child with a defect:

Defect	No.	Cause of death	Age at death
Feeding difficulty	1	(a) Cardiac failure	13 months
? Cri-de-chat syndrome		(b) Broncho-pneumonia	
Failure to thrive			

There were 8 deaths during 1971 of handicapped pre-school children:

Handicap	No.	Cause of death	Age at death
Wilm's tumour	1	Wilm's tumour of R. kidney	2½ years
Cerebral palsy	1	Gliososis of brain	3 months
Pierre Robin syndrome	1	Pneumococcal meningitis and broncho-pneumonia	1 year
Retarded	1	Broncho-pneumonia	2 years 10 mths.
Down's syndrome and congenital heart defect	1	Broncho-pneumonia	2 months
Rubella syndrome (microcephaly, partial sight and retarded)	1	Dehydration and gastro-enteritis	2 years
Spina bifida and hydrocephalus	1	Intestinal obstruction	1 year 5 mths.
Spina bifida	1	Broncho-pneumonia	7 months
Total	8		

CHILDREN "AT RISK":

Babies that might not develop normally were placed on the "At risk" special register and examined at the three selected ages of 6 - 8 weeks, 6 - 9 months and 12 - 18 months.

Year	Number of babies on the "At risk" register						
1966	566
1967	644
1968	583
1969	463
1970	550
1971	552

During 1971, reasons for which babies were placed on the register are as follows. Some babies had several reasons why they were placed on the "At Risk" register.

Reason	No. of babies on the "At risk" Register						
Premature	169
Forceps delivery	123
Caesarian Section	96
Breech delivery	53
Rh Negative	3
Multiple Pregnancy	55
Illness of Baby	38
Illness of Mother	8
Congenital abnormalities	57
Other Reasons	35

Congenital Abnormalities:

During 1971, 19 congenital abnormalities were notified. This low figure is probably due to the fact that notifications are of those congenital abnormalities observed at birth. Eighteen abnormalities were notified by the hospital and 1 by a midwife.

The figures received are as follows:

Bi-lateral talipes	1
Cleft Palate	1
Hare lip and cleft palate	1
Marginal hare lip	1
Dura-visible bi-lateral hare lip and cleft palate and exomphalos	1
Cyst under tongue	1
Hydrops foetalis	1
Meningocele	1
Hydrocephalic	1
Spina bifida	2
Spina bifida and talipes	1
Spina-bifida - extended legs and club feet	1
Anencephalic and cervical meningocele	1
Anencephalic	5
Total	19

Ascertainment of Deafness in Young Children - Screening Tests for Hearing:

As in previous years it was the policy of the department to use the tests devised by the staff of the Department of Audiology and Education of the Deaf of Manchester University, to screen the hearing of all babies considered to be in any way at risk of a hearing loss.

This screening was carried out by members of the nursing staff and the number of trained staff in the department at the end of the year was as follows:

No. of health visitors trained for testing infants:

7 - 12 months	Full time - 13
		Part time - 3

No. of school and clinic nurses trained for testing infants:

7 - 12 months		Full time - 2
		Part time - 6

No. of hygienists trained for testing infants:

7 - 12 months	Part time - 3
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No. of health visitors trained to test children:

1 - 5 years	Full time - 9
		Part time - 3

It was not considered necessary to have any further members of staff trained by the Department of Audiology during the year.

Hearing can be screened with accuracy from the age of seven months and the majority of children tested (89.7%) were under the age of one year. Ideally all children should have their ability to hear checked at this age, but unfortunately this is not possible in the time available. In 1971, 1,327 children under five years of age had their hearing screened, compared with 1,215 children in 1970. Children over the age of one year were usually tested for a very specific reason, such as speech delay or suspected deafness and not as a routine procedure. It is hardly surprising therefore that whilst only 0.4 of the children under the age of one who were tested failed three hearing tests, 0.9% of children aged one to two years and 28.0% of children tested aged two to five years failed three hearing tests.

Only when a child had failed to respond normally to the hearing tests on three separate occasions was further action taken, by referring the child concerned for a medical opinion. Of the 13 children who failed three hearing tests in 1971, 5 were referred to the Department of Audiology for further testing and of these, one was considered to have normal hearing, one conductive hearing loss and he was therefore referred to the consultant E.N.T. surgeon, one is to have further investigations and two have not yet been seen. Of the remaining 8 children, 3 were found to have a conductive hearing loss and were treated by the consultant E.N.T. surgeon, Mr. Mahindraker, one child has a congenital abnormality of the ear, one child passed a fourth test and the other three children are to have a fourth test after an interval. The decision to test the hearing a fourth time is usually taken where there is evidence of developmental delay which could have affected the child's ability to co-operate.

Results

	Under 1 year	%	1 to 2 years	%	2 to 5 years	%	Totals	%
Number tested ..	1190	89.7	112	8.4	25	1.9	1327	
Passed—								
1st Test ..	1128	94.9	101	90.2	14	56.0	1,243	93.7
2nd Test ..	44	3.6	7	6.2	3	12.0	54	4.0
3rd Test ..	13	1.1	3	2.7	1	4.0	17	1.3
Failed 3 Tests ..	5	0.4	1	0.9	7	28.0	13	1.0
Diagnosed—								
Deaf	1	0.1	0	0.0	3	12.0	4	0.3
Not Deaf ..	1	0.1	0	0.0	1	4.0	2	0.2
Under consid- eration ..	3	0.2	1	0.9	3	12.0	7	0.5
Where tested—								
At home ..	1093	91.8	97	86.6	22	88.0	1,212	91.3
At clinic ..	97	8.2	15	13.4	2	8.0	114	8.6
At nursery ..	0	0	0	0.0	1	4.0	1	0.1

Five children who had failed three hearing tests in 1970 were scheduled for further testing in 1971. Three had been referred to the Department of Audiology, but unfortunately, two left the district before they were seen, the third child was found to have a hearing loss and is being treated accordingly. The other two children were considered to have normal hearing after further testing.

Developmental Paediatrics:

Developmental paediatrics concerns the observation and testing of a child's progress from the neonatal stage of complete dependence on others through the various stages of learning, or development, and comparing these with the norm for any particular age. Any child whose progress is in any way delayed can thus be detected at an early age and appropriate action taken to determine the cause and initiate treatment, if the condition is amenable to treatment.

Both the medical officers at the Child Health Clinics and the health visitors on their domiciliary visits undertake development screening. There are certain key ages at which discernable progress in a child's development can be most easily noted. These key ages are six weeks, six months, nine to twelve months, eighteen months, two years, three years and four and a half years. Ideally all children should be screened at all the key ages, but this is not practicable in the time available.

At the Child Health Clinics developmental assessments are made by the medical officers at each of the three key ages during the first year of life and at later ages where necessary. The health visitors screen particularly children in the "At risk" categories when they make their domiciliary visits. They assess the baby's progress at 6 to 8 weeks and they follow this up if necessary at 6 to 9 months and 12 to 18 months.

In order to ensure that every baby whether in the "At risk" group or not and whether they attend a Child Health Clinic or not, has his/her development assessed at least at the most informative key age of nine to twelve months, we are considering the feasibility of the health visitors screening all children at nine months and referring for further assessment by the medical officers at one year, any child about whose development they are doubtful.

The Psychological Testing of Children under Two:

The Griffith Mental Development Scale is a useful method of assessing the progress of children whose development level is under two years of age, although their chronological age may be more.

The number of children tested by the Senior Medical Officer using this scale has increased with the extension of the assessment clinic at Bolton District General Hospital. A total of 35 children were seen in 1971 compared with only 14 in 1970 and 25 of them were tested at the hospital. Eight of the 35 children were referred from the hospital premature baby clinic, one by the Consultant Child Psychiatrist, Dr. M. Jonas, and the remainder by the Consultant Paediatrician, Dr. W. Dickson.

Dr. Griffiths has now extended her scale for use with children over two years of age and the Senior Medical Officer has attended the Royal Manchester Children's Hospital to observe the use of the extended scale.

Routine Testing of Babies for Phenylketonuria:

Phenylketonuria is an inherited metabolic defect in which the baby appears normal at birth but progressive mental deterioration occurs from the age of a few weeks unless the child is given a diet low in phenylalanine. Early diagnosis is therefore essential in order to prevent mental retardation. Phenylketonuria can be diagnosed by testing the urine with Phenistix, but this is unsatisfactory as false negatives may be recorded.

Arising out of the report of a working party of the Medical Research Council it was decided to replace the Phenistix test by a test on blood specimens from each infant. The method chosen was the Scriver Test. Scriver testing started in November, 1969, and is carried out at the initial visit to new babies between the 10th and 15th day after birth by the health visitor.

If the baby for any reason is kept in hospital after the 10th day the test is done in hospital and if the health visitor is doubtful whether a test has been done there, she rings the hospital to check, to avoid the Scriver test being missed.

The blood samples are sent to the Royal Manchester Children's Hospital for testing and the results are received within ten days.

In 1971, 2,507 babies were tested. Of these, 75 babies had the test carried out at the Bolton District General Hospital and in the remaining 2,432 cases the health visitor obtained the blood specimen. In some cases a repeat test was requested by the laboratory either because the specimen was haemolysed or had been broken in transit or in the centrifuge, or because there was a slight increase in phenylalanine or other amino acids. A repeat test was requested in 154 cases during the year, but the parents of 5 of these babies were not agreeable to a further blood specimen being taken from the child.

One hundred and sixty six babies were not tested, in 3 cases the parents refused to co-operate, in 43 cases the baby died before having the test and in 63 cases the family moved out of Bolton.

No new case of phenylketonuria was detected among any of those babies tested during the year.

In some instances it is necessary to take specimens from older children when the child has transferred from another area where no screening test for phenylketonuria has been done or at the request of Dr. W. Dickson, Consultant Paediatrician to the Bolton Group of Hospitals, and all these specimens also are accepted by Dr. Komrower, Consultant Paediatrician at the Royal Manchester Children's Hospital.

One child in this group was diagnosed as a case of phenylketonuria. He was born in 1968 and the Phenistix test which was being used at that time was negative. A Scriver Test was done in 1971 because of clinical signs and this was positive.

At the request of Dr. Komrower a health visitor has also taken blood specimens every fortnight from a child who was found to have phenylketonuria in 1970 as a result of a routine Scriver test, and who is making good progress. His mother, who is expecting her second child in August, is also checked weekly by the health visitor.

Care of Unmarried Mothers:

During 1971 the social worker of the Bolton and District Family Care Association dealt with 112 cases. Of these 19 were girls aged 16 or less and 17 gave birth to live babies.

	1967	1968	1969	1970	1971
Total number of girls aged 16 years and under who gave birth to live babies ..	16	12	24	20	17

Age of mothers at date of birth of their babies:

Age of mother at last birthday	1967	1968	1969	1970	1971
16 years	6	7	10	8	12
15 years	8	3	9	6	5
14 years	2	2	4	6	1
13 years	—	—	1	—	—
12 years	—	—	—	—	1

It is encouraging to report that during the year three unmarried mothers on their own initiative visited the Health Department to seek information on classes where they could learn relaxation exercises and mothercraft. They were directed to the classes nearest their homes, which they attended regularly. The girls expressed appreciation on the help given to them by the nursing staff conducting these classes.

The Battered Baby:

Following the meeting about this matter in the previous year, steps were being taken to investigate any children who may be considered to be in this category. Emphasis was particularly laid on the prevention of the condition by advice to parents who seemed to have unusual difficulties in child rearing. It was recognised that any injuries to children, especially of a repeated nature, may need to be investigated if there seemed to be some uncertainty of how they originated so that more severe trauma to the child could be avoided.

Family Planning:

The Bolton Branch of the Family Planning Association has provided family planning clinics for Bolton and District during 1971.

Two clinics weekly have been held at the Civic Centre and one at Astley Bridge in the evening and 2 daytime clinics were held at Halliwell Health Centre.

The statistics for these clinics are as follows:

CIVIC CENTRE:						Total
Sessions held	95	
Doctor Sessions		216	
New Patients	659	
1st Visit	1,596	} 4,546
Repeat Visits	2,950	

ASTLEY BRIDGE:						
Mixed Sessions	48	
New Patients	195	
1st Visit	495	} 1,281
Repeat Visits	786	

HALLIWELL HEALTH CENTRE:						
I.U.D. Sessions	44	(229 I.U.D. fitted)
Mixed Sessions	49	
New Patients	155	
Repeat Visits	1,232	

During the year, 875 cervical smears were taken as part of the routine examinations of the patients attending. There were no positive smears but there were some gynaecological conditions requiring treatment, these being referred to general practitioners.

The Local Authority continued to accept the financial payment for patients referred on medical and social grounds and in 1971 there were 134 of these.

The voluntary workers of the Family Planning Association have continued the weekly visiting service to the mothers in the lying-in wards at Bolton District General Hospital and have been well received. As a direct result of this, several patients have attended the clinic.

The health visitors and social workers including the Probationary Service have also referred cases to the clinic during the year.

The Abortion Act, 1967:

This Act came into operation on 27th April, 1968. It requires notification of each abortion to the Chief Medical Officer of the Department of Health and Social Security within 7 days of the operation.

Bolton C.B.

Total	Marital status			Age						Place of operation			
	Single	Married	Other	Under 16	16-19	20-34	35-44	45 & over	Not stated	Home region		Other region	
										NHS Hospital	Non NHS	NHS Hospital	Non NHS
182	64	93	25	4	30	112	36	—	—	151	7	—	24

Distribution of Welfare Foods:

Sales of Welfare Foods at the Civic Centre and Child Health Clinics during the past three years were as follows:

Commodity	1969	1970	1971
National Dried Milk	3,990	3,168	2,828 packets
Cod Liver Oil	2,885	2,374	1,098 bottles
Vitamin A & D Tablets	2,750	3,004	2,271 packets
Orange Juice	41,728	45,112	42,208 bottles
Vitamins A, D & C Drops	from April, 1971		3,488 bottles

Day Nurseries and Child Minders:

From 1st April, 1971, day nurseries and child minders became the responsibility of the new Social Services Department. The organisation and general supervision was continued to be carried on by the Health Department until October, 1971, to allow the new department to organise and delegate its duties.

At the end of October, 1971, the number of registered child minders was 68, and the number of registered play groups was 28. There were 12 child minders and 4 play groups awaiting registration.

There was a number of handicapped children awaiting admission to the Day Nurseries. Some of these children had been on the list for several months because the transport they required was not available.

A medical officer from the Health Department continues to attend each nursery once a month to examine the children and to carry out the immunisation programme where necessary.

DENTAL TREATMENT

I am indebted to Mr. S. Bray, the Principal School Dental Officer, for the following information and comments:

“There were 5 dental surgeries available for use, two manned by full-time officers and 3 by part-time officers working on a sessional basis. Only part of the sessions are devoted to this service. During the year 285 nursery school children and 19 expectant or nursing mothers were inspected. A marked deterioration in the condition of the teeth of pre-school immigrant children has been noted this year and this is probably due to changes in their dietary habits. Dental health education was continued by talks to nursery classes and chairside talks to mothers.”

No. of dental treatment centres in use at the end of the year	3
No. of dental officer sessions devoted to priority services	38
No. of expectant and nursing mothers examined	19
No. of children under 5 years (pre-school age) examined	285

Physiotherapy:

Most of the patients treated in the physiotherapy department were referred by the school medical officers and from the Geriatric Clinic.

ULTRA VIOLET LIGHT TREATMENT:

As from January, 1971, two sessions of U.V.L. per week were given on Tuesdays and Fridays. Due to fewer children being recommended for treatment it was still possible to treat pre-school and school children together. During the year, 45 children attended for 584 treatments.

The conditions for which the medical officers recommended children for treatment are show in the following table:-

Condition	No.
Asthma	2
General debility	5
Coughs and Colds	15
Bronchitis	6
Anaemia	2
Nasal Catarrh	4
Throat infections	2
Underweight	1
Genu Varum	1
Genu Valgum	2
Others	5
TOTAL	45

One child only was sent for breathing exercises, These exercises followed the child's U.V.L. session. Altogether the child received 16 treatments.

LOSTOCK OPEN AIR SCHOOL :

The physiotherapist restarted U.V.L. sessions at the school in October, 1971. Due to the school being extended it was impossible to give the children U.V.L. before this date.

During October and December, 20 children at 8 sessions received 121 treatments.

As from January, 1971, the children at L.O.A.S. received physiotherapy treatment one afternoon per week. The treatments included postural drainage, foot exercises, abdominal exercises and breathing exercises. The children were treated individually except for the breathing exercises which were taken in a class.

No. of patients	135
No. of new patients		12
No. of sessions	29
No. of treatments..	520

FIRWOOD SCHOOL :

The children at Firwood received physiotherapy treatment one morning per week. Each child received individual treatment.

No. of patients	88
No. of new patients		6
No. of sessions	30
No. of treatments..	172

GERIATRIC PATIENTS :

The geriatric patients were treated individually. The treatments consisted of infra-red heat, massage and exercises.

No. of patients	46
No. of new patients		8
No. of sessions	109
No. of treatments..	109

VARIOUS PHYSIOTHERAPY CONDITIONS :

This group consisted of adults, teenagers and children. The physiotherapist treated each patient individually. Treatments consisted of infra-red heat, massage and exercise.

No. of patients	129
No. of new patients		45
No. of sessions	368
No. of treatments..	368

ANTENATAL RELAXATION LECTURES:

Antenatal relaxation lectures were held by the physiotherapist at the Civic Centre four times a week. They were held on Tuesday, Thursday and Friday at 1.30 p.m. and on Wednesday at 12 noon. Each lecture lasted one hour.

Havercroft	74
Heaton Grange	156
Haslam	94
B.D.G.H.	54
No. of patients	378
No. of new patients	188
No. of sessions	210
Total attendances.. .. .	915

COMMUNITY NURSING SERVICES

During the year further developments took place in the management structure of the nursing service. Recommendations of the Report of the Working Party on Management Structure in the Local Authority Nursing Services (Mayston Report) were implemented. Reorganisation was completed in June, 1971, and as a result the nursing establishment was revised:

Nursing Establishment:

- Director of Nursing Services (formerly Chief Nursing Officer)
- 2 Area Nursing Officers - from 1.6.71
- 5 Nursing Officers from 23.6.71
- 39 Health Visitors
- 33 Home Nurses
- 9 Midwives

The objective in restructuring the nursing services is to bring community nursing into line with hospital nursing in preparation for unification of the health service in 1974. To enable health visitors, home nurses and midwives to work more closely with each other it was decided to reorganise on functional lines at first line level and on geographical lines at middle and top level. Two nursing officers are each responsible for a group of health visitors and a group of home nurses. They are assisted by a nursing officer for each discipline. In addition one of the area nursing officers who is the non-medical supervisor of midwives is responsible for the domiciliary midwives and is assisted by a nursing officer (midwifery).

At the end of the year nursing staff in post comprised:

- Director of Nursing Services
- 2 Area Nursing Officers
- 5 Nursing Officers (2 health visiting, 2 home nursing, 1 midwifery)
- 37 Health visiting staff comprising:
 - 1 group adviser
 - 2 specialist health visitors (geriatric and tuberculosis)
 - 3 field work instructors
 - 14 health visitors (W.T.E.)
 - 11½ school nurses (W.T.E.)
 - 1 clinic nurse (W.T.E.)
 - 1 S.E.N.
 - 3½ health assistants (W.T.E.)
- There were 2 vacancies.

33 Home Nurses comprising:

- 2 senior home nurses
- 1 specialist home nurse (hospital liaison)
- 17 S.R.N. home nurses (W.T.E.)
- 9½ S.E.N. home nurses (W.T.E.)
- 3½ nursing auxiliaries (W.T.E.)
- There were no vacancies.

8½ Midwives

There was a vacancy for a part-time midwife.

The home nursing service was fully staffed throughout the year. Recruitment presented no difficulties and all full-time S.R.N.'s and S.E.N.'s are appointed with a view to taking district nurse training at the earliest opportunity. Attachment to general practices is now well established and it has been possible to replace 1 further S.R.N. with a S.E.N. Further development in providing an evening nursing service and more nursing help for general practitioners at their surgeries is not possible until the establishment is increased to meet these needs.

There was no change in the midwifery staff during 1971. Further reduction in the number of domiciliary births was offset by the increased number of early discharge cases - particularly non-selected cases, and the establishment of evening relaxation and mothercraft classes. It is hoped that some progress will be made with interchange of local authority and hospital midwifery staff on an experimental basis during the coming year.

There was an improvement in recruitment in the health visiting service. Three student health visitors completed their training and joined the staff in September. In addition, 1 full time and 1 part time health visitor were recruited but 6 qualified health visitors resigned during the year and reduced the number in post to the lowest level for 15 years. The policy of relieving health visitors of duties that can be satisfactorily carried out by less highly qualified staff as recommended in Ministry of Health Circular 12/65, "Use of Ancillary Help in the Local Authority Nursing Service" has now been in operation for five years and has resulted in a change in the "mix" of field grade staff in post:

	1957	1967	1971
Health visitors	27	27	20
S.R.N.'s and S.E.N.'s	4	10	13½ (W.T.E.)
Unqualified assistants	—	2	3½ (W.T.E.)
	—	—	—
Total	<u>31</u>	<u>39</u>	<u>37</u>

The increase in the number of school nurses and health assistants has been necessary in order to cover sessions and clinics formerly attended by health visitors but has limited the number of health visitors who could be appointed within the health visiting establishment of field grade staff. This remained static at 40 since 1948 until 1971, when it was reduced to 39 on implementation of the Mayston re-organisation.

Attachment to general practices and expansion of work with vulnerable groups, particularly the elderly, now makes it a matter of urgency that the establishment be re-assessed to a more realistic figure. It is hoped that the Secretary of State for Health will shortly publish a general yardstick to serve as a basis for a more precise evaluation of standards of nursing care related to local needs, in preparation for unification of the local authority and hospital nursing service. It is encouraging to note that there has been a marked increase in applications for sponsorship for health visitor training during the year.

PRACTICAL TRAINING OF STUDENTS AND OTHER VISITORS

Providing practical experience of community nursing and visits of observation for an ever increasing number and variety of students involves staff and management in a heavy commitment which is not adequately allowed for in current staff establishment. It is to be expected that this problem will become even more acute when visits of observation are requested for medical students and when the community care option for hospital student nurses is implemented in 1973. It may be that the financial implications of providing practical placements on a continuing basis for numerous students should now be considered.

Hospital Nurses:

The Medical Officer of Health and the Deputy Medical Officer of Health gave lectures to student nurses at Bolton School of Nursing in accordance with the requirements of the General Nursing Council's Syllabus.

Practical experience of the community health services was provided for the following hospital nurses:

	1969	1970	1971
Student nurses, 1st year of training	80	80	84
Student nurses, 2nd year of training	—	20	21
Student nurses, 3rd year of training	60	48	54
Student nurses taking the obstetric course	4	8	14
Pupil nurses training for enrolment	24	28	27
Psychiatric student nurses	8	6	9
Total	<u>176</u>	<u>190</u>	<u>209</u>

The meeting of hospital nurses and local authority nursing staff following the practical experience in community care led to discussion of many aspects of special interest and an interchange of views on nursing in a unified health service of the future.

Student Health Visitors:

Four student health visitors were placed with Fieldwork Instructors for their practical training during the course and in addition, 9 students spent one week accompanying health visitors on their visits to gain experience of health visitor attachment to general practice in Bolton as attachment schemes were not in operation in their placement areas. Five students completed their training on the 1970/71 course and spent six weeks in the Health Department during their fourth term for supervised health visiting practice before qualifying in September.

Day Nursery Students:

Thirty five student nursery nurses spent a half day visiting child health clinics during the year.

Other Visitors:

Other visitors to the Health Department included a group of medical secretaries, student teachers, a national administrative trainee, 6 post-graduate social administration students and 6 students studying for the Certificate in Social Work. We were very pleased to welcome a Regional Nursing Supervisor at the Ministry of Health in Israel visiting this country on a World Health Organisation Fellowship who spent three days observing the work of the nursing services. In addition, 94 school girls from 6 senior schools visited the Health Department as part of their courses in sociology.

Staff Training:

The policy of sending staff on refresher courses at approximately five year intervals to up-date their professional knowledge and keep them informed of changes and new trends has been continued. Two S.R.N.'s and two S.E.N.'s in the home nursing service attended courses organised by the Queen's Institute of District Nursing. Refresher courses which are mainly organised by nursing associations, are usually of two weeks duration and resident at distant educational establishments during vacation times. It is difficult for married persons with family commitments to make suitable domestic arrangements to enable them to attend. As an alternative to the traditional Summer Schools, arrangements were made for staff to attend short local courses on specialised subjects whenever possible. Topics have included drugs and young people, a family planning appreciation course, health education and epilepsy. The local authority training officer mounted a two day course on instructional skills for school nurses to prepare them for undertaking talks to primary school children and a study for home nurses on Management in the Nursing Services.

At the invitation of the Manchester Regional Hospital Board, the Chief Nursing Officer attended a Senior Management Appreciation Course at the Regional Staff College and a four weeks special advanced Management Course for senior nurses and midwives organised by the National Nursing Staff Committee for the Department of Health & Social Security at Manchester University. The senior nursing officers attended a conference organised by the Royal College of Nursing on "Continuity of Patient Care" following the publication of the Dan Mason Report, "Home from Hospital".

Study Days:

The annual study day for local authority nursing personnel was held at the Bolton Medical Institute on "The Changing Social World". It was attended by colleagues working in other areas, senior staff from the local hospitals, social workers and tutorial staff and students attending the Bolton Health Visitors' Training Course. We are indebted to the lecturers for their excellent talks and to the Local Medical Committee for the use of their post graduate centre where the excellent facilities contributed in no small measure to the success of the day.

MIDWIFERY

Distribution of Births:

There were 107 domiciliary live births, a reduction of 38 on the previous year. Four babies were stillborn at home. One mother was booked for domiciliary confinement and three were unbooked cases receiving no ante-natal care.

The following table shows the distribution of births and comparisons with previous years.

	1969	1970	1971
Total live births..	2,666	2,627	2,686
Total stillbirths	39	57	36
Domiciliary births	190	145	107
Bolton District General Hospital	1,578	1,644	1,665
Maternity Homes	881	813	881

The number of babies born to Bolton mothers in maternity establishments outside Bolton, excluding Bolton District General Hospital, totalled 23 live births and 2 stillbirths.

Domiciliary Confinements:

Midwives were in attendance at 107 confinements. Visits were made as follows:

	1970	1971
Ante natal Visits	1,097	620
Nursing visits during puerperium:		
Patients delivered at home	1,986	4,073 1,078 } 3,728 2,655
Patients discharged home early from hospital	2,087	
Post natal visits	110	82
Ineffective visits to households	526	635
Giving of iron therapy injections	428	214

Local Authority Ante Natal Clinic:

A weekly ante natal clinic was held at the Civic Centre, staffed by midwives and a health visitor. A medical officer attended at the request of the midwives mainly for examination of patients referred by the social worker of the Bolton and District Family Care Association, or any patient where the midwife had difficulty in obtaining a blood sample.

Fifty patients were referred from the clinic to the general practitioner to be considered for booking at Bolton District General Hospital or the Maternity Homes. These patients were considered to be unsuitable for domiciliary confinements for the following reasons:

Anaemia	2
Ante partum haemorrhage	1
Early rupture of membranes	2
Grande Multiparity	3
Hydramnious	1
Intra uterine death	1
Mal presentations	7
Pre-eclamptic toxæmia	3
Post-maturity	16
Poor obstetric history	3
Premature labour	1
Rhesus negative	6
Social reasons	4

	1970	1971
No. of patients registered during the year	168	103
No. of attendances at the ante-natal clinic	786	450
Haematology - No. samples taken	346	212
No. of maternity packs issued	147	100

General Practitioner Ante-natal Clinics:

Midwives assisted general practitioners at eight ante-natal clinics held weekly - one clinic held on alternative weeks and two monthly clinics at their practice premises. The clinics continue to work well. The assistance given by midwife and health visitor at these clinics is now very much appreciated by the general practitioner. The Report of the Royal College of Midwives concerning the Preparation for Parenthood comments on the value of well-organised ante-natal clinics.

The first visit to the clinic is of great importance in establishing a good relationship between the young mother and members of the maternity team. The friendly informal atmosphere and the opportunity to meet other expectant mothers helps the patient to relax and talk about her anxieties. Examinations can cause some embarrassment to the young mother unless the doctor or midwife takes the trouble to explain the reasons for the procedure carried out and re-assure the over-anxious patient when necessary. It is a matter for regret that more general practitioners do not organise ante-natal clinics at their surgeries when assistance from domiciliary midwives and health visitors is readily available to them.

Ante-natal sessions attending by midwives:	1970	1971
Local Authority Clinics	46	46
General Practice Clinics	409	423

Flying Squad:

The service of the Flying Squad was not required during 1971.

Medical Aid:

Medical aid was sought by midwives on 43 occasions during 1971.

Testing for Congenital Dislocation of Hip:

Midwives continued to test all babies born at home. No cases were detected during 1971.

The Oxygenaire Portable Incubator:

The incubator is stored at the Ambulance Depot where it is kept at a constant temperature. By connecting the incubator to the battery in the ambulance the temperature can be maintained during transit thus ensuring that babies are transported to hospital under the best possible conditions. The cot was used on seven occasions during 1971.

Early Discharge of Maternity Patients from Hospital:

The scheme for nursing of selected early discharge patients at home forty eight hours after delivery from Bolton District General Hospital has operated successfully in Bolton since 1964. Early in 1971, this scheme was extended to include discharge from the maternity homes in Bolton.

Assessment of patients for early discharge from the maternity homes commenced in February, 1971, and early discharge of these patients to their homes after 48 hours after delivery began in June, 1971. Difficulties are still encountered with patients who take their own discharge, mostly patients with inadequate domestic help.

There has been a slight increase in the number of selected early discharge patients during 1971. This number will gradually increase as the pattern for early discharge of patients from the maternity homes becomes established.

Selected Patients for Early Discharge from Bolton District General Hospital:

	1970	1971
No. of investigations requested by B.D.G.H.	304	249
No. of investigations not suitable for early discharge	59	54
No. of selected early discharge patients nursed by domiciliary midwives	257	228
No. of non-selected patients discharged home after 48 hours from B.D.G.H.	121	214

Selected Patients for Early Discharge from the three Maternity Homes (from June):

No. of investigations requested by the Maternity Home (from Feb., 1971)	126
No. of investigations not suitable for early discharge	7
No. of selected early discharge patients nursed by domiciliary midwives (from June, 1971)	28
Total No. of selected early discharge patients from B.D.G.H. and the Maternity Homes nursed by domiciliary midwives in 1971	470
No. of non-selected patients discharged home from B.D.G.H. and the Maternity Homes	214

Table showing some cases where assistance in the home was not adequate:

No Help	Dependent on Neighbours	Dependent on mother or mother-in-law	Husband off sick	Husband unemployed	Husband on holiday	Husband off work
10	1 - daily 2 hrs. 4 - 3 days 5 - 4 days	2 - 5 days 37 - 7 days	4	8	1 - 4 days 20 - 7 days	1 - 2 days 1 - 3 days 3 - 4 days 9 - 7 days 1 - 10 days
10	10	39	4	8	21	15

GRAND TOTAL - 107

Seventy three patients not selected for early discharge before admission to hospital were discharged home from Bolton District General Hospital. Forty four of these were discharged at the request of Bolton District General Hospital for various reasons:

Took own discharge	Still-births	Baby died	Baby a contact gastro-enteritis	Baby transferred Pendlebury Hospital	Baby kept in Prem. Unit	Baby kept in hospital
29	18	7	1	8	4	6

GRAND TOTAL - 73

Fifty one cases not selected for early discharge were discharged home from the maternity homes in the Borough and from private maternity homes outside the Borough. Many took their own discharge. Assessment for planned early discharge of patients in the maternity homes in Bolton commenced in June this year. The details are as follows:

Took own discharge		Stillbirths	Maternity Homes outside the Borough
Before June, 1971	24	1	10
After June, 1971	24		

GRAND TOTAL - 59

The following selected early discharge patients were transferred back to Bolton District General Hospital for reasons given below:

1. Baby re-admitted to hospital on fifth day with convulsions.
2. Secondary post-partum haemorrhage on the tenth day. Mother and baby transferred to Bolton District General Hospital.

3. Secondary post-partum haemorrhage on the sixth day. Mother and baby transferred to Bolton District General Hospital.
4. Baby discharged from the maternity home on seventh day. Had been very jaundiced from birth. Re-admitted to Bolton District General Hospital on eighth day - pyrexia and reluctant to feed.

Health Education: Mothercraft Classes for Expectant Mothers:

Midwives continue to give instruction in ante-natal exercises. Combined classes of relaxation and mothercraft are held weekly, in which the midwives and health visitors work together.

The evening classes commenced in 1970 have become very popular. This has proved beneficial to working mothers who are unable to attend classes held during the day. The largest group of those attending classes are the enquiring, thinking, reasonably well informed girls who are delighted to be pregnant and are anxious to learn as much as possible so that they may do the best for their babies. It is the women of the lower social groups, whose need for teaching is the greatest, who are the most reluctant to attend. It is to be hoped that with the development of general practitioner ante-natal clinics, expectant mothers will be encouraged to attend mothercraft and relaxation classes by the doctor, midwife or health visitor in attendance. There is scope for all patients to be given the opportunity to attend classes beneficial to them, whilst in hospital after the birth of their baby. Perhaps the future unification of the midwifery services will remedy this need for health education.

Details of Ante-natal Relaxation and Mothercraft Classes conducted by Midwives and Health Visitors during 1971:

				No. of Patients	No. of Attendances	
Civic Centre	2 p.m.	142	490	
Civic Centre	7.30 p.m.	78	418	
Deane Clinic	7.30 p.m.	59	299	
Halliwell Clinic	10 a.m.	31	179	
Withins Clinic	7.30 p.m.	44	233	
				1969	1970	1971
Total No. of patients	218	339	355
Total No. of attendances	1,018	1,432	1,619

The physiotherapist held classes for ante-natal relaxation exercises by appointment. Many of the expectant mothers attending these classes joined the mothercraft session taken by the health visitors.

Parentcraft Classes:

During 1971 two series of Parentcraft classes were held. A personal invitation was sent to young couples expecting their first baby and the response was very good. Husbands were very interested in all the subjects taught. Practical problems such as bathing, feeding and the routine care of the baby were freely discussed and they were keen to learn as much as possible about the care of the baby.

Radio Telephone for Midwives:

All midwives are equipped with a small portable radio set and are responsible for their own set. The radio sets are beneficial to the midwives and also help administratively in the smooth running of the midwifery service.

District Midwifery Training:

Five pupil midwives completed their Part II training. Four were successful in the examination. One pupil midwife failed on the first attempt but was successful the second time. The revised programme of training adopted in 1969 for student midwives to give them an insight into community services is now a recognised part of their training. This entails more work in the planning of talks and arranging visits to various other agencies, but gives the student a better understanding of the services in the community.

Training of Student Nurses:

During 1971 fourteen hospital nurses undertaking the obstetric nurse training at Bolton District General Hospital spent one day each with the domiciliary midwives. This included a visit to a general practitioner antenatal clinic and visits in the home with a midwife.

HEALTH VISITING

Home Visits:

There has been a decrease in the number of effective visits paid during the year due mainly to shortage of staff. The small number of health visitors in post not only limits the overall hours available for work, but also reduced the proportion of time they can spend on visiting after they have covered essential clinic duties and other sessions. It is encouraging to note that there has been a slight increase in visits to persons aged 65 years and over, although this represents only 26% of persons in this rising age group. There was also an increase in visits to Asian immigrant families, an indication that health visitors are directing their efforts to areas where their work in primary prevention is most productive. It is now essential that the health visiting establishment be re-assessed to enable more time to be spent with vulnerable groups in the community.

Health visitors' work has undergone several changes since the controlled system was implemented in 1968. At the end of 1970 it became apparent that the target time allowed for first visits to new babies was inadequate because of the inclusion of new factors such as the Scriver test for phenylketonuria and explanation of the immunisation programme, etc. In order to test this theory a survey was carried out by the Work Study staff during the first three months of the year. As a result the target time for this type of visit was increased from 47 to 80 minutes and a compensatory adjustment was made by reducing the existing target time for other visits from 47 to 46 minutes. A further reduction of miscellaneous visits has occurred as a result of a more accurate recording of visits into their specific category.

ANALYSIS OF HOME VISITS:

	1969	1970	1971
First visits to babies born during the year ..	2,710	3,015	2,714
Subsequent visits	6,855	7,052	5,395
Visits to children aged 1 - 2 years	7,620	7,569	5,794
Visits to children aged 2 - 5 years	9,383	8,281	6,822
Total visits to children under 5 years	<u>26,569</u>	<u>25,917</u>	<u>20,725</u>
Visits to persons aged 65 years and over ..	6,768	5,244	5,766
Visits to mentally disordered persons	160	191	99
Visits to persons discharged from hospital ..	154	738	536
Visits re infectious diseases (including tuberculosis)	465	763	745
Visits in connection with priority rehousing on medico-social grounds	317	254	275
Miscellaneous visits	10,488	8,313	5,422
Total effective visits	<u>44,920</u>	<u>41,420</u>	<u>33,568</u>
Ineffective visits	5,911	4,661	3,763
Included above are visits to Commonwealth immigrants	1,917	1,855	2,424

Weckend Emergency Scheme:

Calls on this service have stabilized at approximately 14 per year. Towards the end of the year it became necessary to review the scheme because the number of health visitors able and willing to offer their services in a voluntary capacity was too limited to meet the commitment. Discussion took place with the Director of Social Services and his staff and it was agreed that health visitors withdraw from the service and social workers take over responsibility for manning the scheme in the new year. The home nurses on weekend duty would be available for any cases requiring nursing between 8 a.m. and 10 p.m.

Tuberculosis Visiting:

One health visitor carried out the duties of after-care of tuberculosis patients. She was assisted at Chest Clinic sessions by an S.R.N.

Home Visits by Specialist Tuberculosis Health Visitor:

	1969	1970	1971
No. of patients	565	545	577
Ineffective visits	not recorded	104	118

As in previous years, the majority of visits were to Asian immigrant families. The specialist tuberculosis health visitor accompanies the physician on his ward rounds at the Chest Hospital when patients are being considered for discharge home. The health visitor is then able to follow up the case and support the patient and his family during the convalescence and until recovery is complete.

B.C.G. for Babies of Immigrant Parents:

The B.C.G. vaccination programme for all new babies born to Asian immigrant parents has continued on the lines outlined in last year's report.

B.C.G. vaccinations carried out at Bolton District General Hospital and the General Practitioner Maternity Homes totalled 292, as against 253 in 1970.

Tuberculosis After-Care Committee:

The specialist tuberculosis health visitor also attends the monthly meeting when the care and after-care of tuberculosis patients and their families is discussed. Special attention is paid to housing needs and a representative of the Housing Department attends the Committee to help with this aspect.

Geriatrics:

The specialist health visitor working in close liaison with the Consultant Physician in Geriatrics continued her duties on the lines described in last year's report. She was assisted by an S.R.N. who was engaged in following up patients after they were discharged home to assist and encourage them to persevere with the rehabilitation procedures they had learned in hospital. These visits are time consuming but essential if patients are to maintain the improvement in their condition which enables them to remain in the community and not deteriorate to the point where re-admission to hospital is inevitable.

Geriatric Advisory Clinic:

This clinic is now well established. The departmental medical officer is assisted by the S.R.N. who specialises in work with elderly persons and the specialist health visitor is available for individual counselling and teaching of health topics related to the needs of the older members of the community. Whilst the clinic is only able to deal with a small percentage of elderly persons it is an example of how primary prevention can contribute to the well being of the population. The number of persons attending during the year has increased from 124 to 239.

The health visitor and her assistant continue to supervise and organise a group of voluntary helpers who direct their efforts to work for the elderly. We are grateful for their continued interest and help.

Paediatrics:

The excellent liaison that exists between hospital and health department staff contributes not only to the clinical care of patients but also to the prevention and early detection of potentially handicapping conditions of young children. A health visitor attends the paediatric out patients' clinic where she acts as a link between hospital and home. She also participates in ward rounds where her knowledge and experience of the home background and social factors involved in the illness is of value to the paediatric consultant and ward sister, particularly when discharge of the patient is being considered. The liaison health visitor is able to keep up to date with developments in the paediatric field and to disseminate any relevant information to other health visitors who may be concerned.

Liaison with General Practitioners:

Full attachment of health visitors to general practices has been in operation for four years and is now accepted as the most satisfactory way of providing local authority nursing services in the community. The high proportion of single practices in Bolton gives rise to some difficulty in allocating a limited number of health visitors in attachment schemes. Efforts are being made to build up teams of community nursing staff at health centres. Consideration is being given to the provision of nursing assistance at general practitioner immunisation sessions at a future date.

At the end of the year, 19 full time and 2 part-time health visitors were working with 63 doctors in 42 practices, 26 of which are single-handed practices.

There has been no increase in the number of clinics staffed by health visitors in practice premises.

The Prevention of Break-up of Families:

Health visitors spend a large proportion of their time in seeking out and supporting vulnerable groups in the community in an effort to prevent breakdown of normal family life. They have the opportunity not shared by other workers of visiting any homes where there are young children in order, where

necessary, to advise and teach parents in all aspects of child development and management. This enables them to detect at an early stage cases of potential baby battering, which are then referred to social workers.

Mothers' Clubs:

The four Mothers' Clubs continue to function successfully on the lines outlined in last year's report. Slum clearance schemes and new population growth areas may necessitate some re-organisation in the near future. These clubs fulfil an important function in breaking down the sense of isolation experienced by some young mothers when they set up home in a new area away from their familiar neighbourhood.

HOME NURSING

With the implementation of the new management structure (dealt with under the Community Nursing Services Section) from June, 1971, there has been some change in the daily organisation of the home nursing service.

The home nursing service is now organised in two areas, north and south (formerly working in three groups). Each is supervised by a district nursing officer. New cases and messages are received at the Health Department by the nursing officers between 8 a.m. and 5.30 p.m. and relayed direct to the district nursing sisters concerned at 8.30 a.m. and 1.30 p.m., daily. Messages after 5.30 p.m. are accepted by the ambulance station to be collected by the nursing officers at 8 a.m. the following day.

With the attachment of district nursing sisters to all general practices the majority of general practitioners contact their own district nursing sisters direct to request visits to new cases or to discuss new treatments, etc. This is either by telephone to the district nursing sisters' homes during specified times or by pre-arranged visits to the general practitioners' surgeries.

The district nursing staff work a five day week, the weekend duties being covered on a rota system. There is a skeleton service of six nurses on duty at weekend to deal with essential nursing care or in cases of extreme illness. The senior sister on duty receives messages via the ambulance depot and is responsible for relaying these to the individual nurses concerned. It is anticipated that a portable radio telephone will be acquired early in the new year to enable the senior sister on duty at the weekend to keep in constant touch with the ambulance depot should an emergency arise.

STATISTICS OF CASES AND VISITS:

	1970	1971
Patients on books at 1st January	1,083	1,223
New patients attended during the year	2,421	2,808
	<hr/>	<hr/>
	3,504	4,031
	<hr/>	<hr/>
Patients remaining on books at 31.12.71	1,223	1,203
	<hr/>	<hr/>

	1970		1971	
VISITS IN AGE GROUPS:	Cases	Visits	Cases	Visits
Children under 5 years	79	542	95	566
5 - 64 years	1,379	29,280	1,642	28,432
65 years and over	2,147	70,030	2,294	79,728
	<hr/>	<hr/>	<hr/>	<hr/>
	3,605	99,852	4,031	108,726
	<hr/>	<hr/>	<hr/>	<hr/>

SUMMARY OF NURSING TREATMENTS:

	1970	1971
General Nursing	71,656	80,692
Injectons	30,507	30,069
	<hr/>	<hr/>
	102,163	110,761
	<hr/>	<hr/>

During the year there has been a considerable increase in the number of cases visited and the number of treatments carried out.

The tempo of the district nursing duties has changed noticeably since the implementation of the planned early discharge of surgical patients from hospital. The district nursing sister is able to use her skills to greater advantage in the observation and post-operative care of these patients, including removal of sutures, etc. (see page 61).

Unfortunately, this care is limited by the pressures of increased visits, necessitating less time available to devote to each case.

As anticipated, the number of elderly persons being nursed in their own homes continues to rise, but whilst one accepts that this is the proper place to nurse these patients, it is becoming increasingly difficult to devote the amount of time desirable to nurse and to rehabilitate them. An increase of 147 cases over 65 years of age, necessitating an increase of 9,036 visits to this age group during the year is but a small indication of the growing needs of the elderly to be nursed outside of hospital.

The slight increase in the nursing care of young children in their own homes is a reflection on acceptance by the hospitals that children of this age better nursed in their own homes. It is anticipated tht the early discharge of surgical cases from hospital to the care of the district nursing sister will extend to this age group during the coming year.

Clinic Sessions:

CIVIC CENTRE:

A clinic is held in the home nursing section of the Health Department, Monday to Friday inclusive from 2 p.m. to 5.30 p.m. This clinic is for the benefit of ambulant patients and those going out to work who require injections for tuberculosis, anaemia, vitamin deficiencies and various allergies. Dressings are also carried out by arrangement with the clinic sister.

	1969	1970	1971
Number of patients attending ..	161	194	178

HALLIWELL HEALTH CENTRE:

A clinic is held at Halliwell Health Centre each morning, Monday to Friday, inclusive, from 11 a.m. to 12 noon. This clinic mainly serves the patients of the 7 doctors practising from the Centre and who are ambulant. The services offered are injections of various types and also dressings and treatments at the request of the doctors concerned.

The clinic sister attends to any children from nearby schools requiring treatment for minor ailments.

	1969	1970	1971
Number of patients attending	157	238	236

CANNON STREET HEALTH CENTRE:

With the opening of Cannon Street Health Centre in September, 1971, a clinic session was commenced on the same lines as that at the Halliwell Health Centre. The district nursing sister attached to the practices of the six doctors working from Cannon Street Health Centre is available at the clinic from 10.30 to 11.30 a.m., Monday to Friday, inclusive. The district nursing sister carries out treatments, dressings and injections on ambulant patients belonging mainly to the general practitioners practising from this Centre.

Patients attending since September, 1971 47

Hospital Liaison - Early Discharge of Patients:

One district nursing sister works full time as Hospital Liaison Officer. She works in close contact with her counterpart from the surrounding County area. The original scheme, which was limited to the patients of three consultant surgeons at Bolton Royal Infirmary, has proved so successful that it was decided to extend the service to cover all surgical wards and departments at Bolton Royal Infirmary. In March, 1971, one ward at B.R.I. was opened as a 5 day ward to take selected surgical cases from the waiting list. These patients are discharged home into the care of the district nursing sister. The Hospital Liaison Officer has been particularly active in the development of this scheme as the Consultant Surgeon and Ward Sisters are dependant on her advice regarding the social and environmental suitability for these patients' discharge home.

One consultant who specialises in the treatment of varicose veins invited the district nursing sisters to attend his out-patients' clinic to see at first hand his specialised treatments and bandaging procedures. The majority of the district nurses have now been to observe this clinic.

In November, 1971, it was decided to extend the early discharge scheme to embrace patients from Bolton District General Hospital. Four surgical wards catering for patients of the same consultant surgeons who work from B.R.I. are involved in this scheme.

In both hospitals the elimination of the procedure of asking patients to return to the ward for treatment, i.e., removal of sutures, etc., has been greatly appreciated by the ward and administrative staff and even more so by the patient. Close co-operation exists with the medico-social workers at both hospitals.

The following table gives details of the number of patients discharged early and the number of hospital bed days saved.

Period covered	No. of patients discharged early	No. of hospital bed days saved
July - Dec., 1970 . .	124	431
Jan. - June, 1971 . .	159	817
July - Dec., 1971 . .	174	969

District Nurse Training:

Five State Registered Nurses completed their district training during the year. All were successful in passing the examination for the National Certificate of District Nursing and were subsequently accepted for posts of district nursing sisters.

Two State Enrolled Nurses took the in-service training course conducted on a day release basis in conjunction with the Manchester Training Centre. Both were successful in passing the examination set by the Queen's Institute of District Nursing.

Nursing Equipment on Loan:

With the increase of elderly patients being nursed in their own homes the demand for nursing aids and equipment designed to assist with rehabilitation has inevitably increased. Back rests and bed cradles, walking aids and commodes are the articles in greatest demand. All articles are loaned free of charge on receipt of a note from the G.P., district nurse or health visitor. Requests for loans are received between 2 p.m. and 5.30 p.m., daily, Monday to Friday inclusive.

Laundry Service:

In certain cases, where it is not possible for relatives to cope with the laundering of draw sheets, a service is provided by the Health Department at the request of the general practitioner or the district nursing sister. This consists of the loan and laundering of draw sheets which are delivered and collected from the patient's home by a department driver. The demand on this service has increased during the year.

	1970	1971
Number of patients receiving the service during the year	99	106
Average number per month	61	74

Supply of Incontinence Garments:

Incontinence garments, i.e., plastic pants with disposable, absorbent linings are available free of charge at the request of the general practitioner, district nursing sister or health visitor. These have proved most advantageous in cases of stress incontinence and where a patient is mobile and also where a handicapped child is incontinent. Many elderly, incontinent patients have become more self-assured since the provision of these garments. They take part in social activities previously denied them due to the embarrassment of incontinence. During the year, 116 patients were in receipt of this service.

Incontinence Pads:

The number of pads issued during the year continues to soar even though the actual number of patients receiving this service shows only slight increase. No doubt there will be an even greater demand in the coming year, following the recent survey of the needs of the elderly and handicapped in the community conducted by the Social Services Department.

Two types of pads are supplied:

Type I - large absorbent paper sheets with a waterproof backing.

Type II - Absorbent cellulose pads for use where a patient is doubly incontinent.

Number of Incontinence Pads Supplied During the Year:

	1969	1970	1971
Type I	31,525	37,375	49,000
Type II	20,640	29,832	32,376
Number of patients receiving the service . .	563	512	514

Dressing Service:

The pre-sterilised dressing service has now become an integral part of the facilities necessary for the highly skilled techniques and sophisticated dressings carried out by the district nursing sisters in the patients' own homes.

With the continuous expansion of the early discharge schemes and the increased awareness which the general practitioners have of the district nursing sisters' abilities since general practitioner attachment, the dressing service has taken on a new dimension.

The girls at Cotton Street Adult Training Centre continue to keep a high standard in the packing of these dressings. All materials for the dressings are obtained by the patients on prescription from their general practitioner. These are collected by the district sisters and forwarded on to Cotton Street Training Centre where they are made up into individual packs. When packed, the Health Department driver transports the boxes to Bolton Royal Infirmary for autoclaving, following which they are taken back to the Health Department to be collected and distributed by the district nursing sisters to their respective patients.

IMMUNISATION AND VACCINATION

In 1971, the Joint Committee on Vaccination and Immunisation reviewed the indications for offering vaccination against smallpox in Great Britain at the present time. Vaccination remains the most reliable measure for the protection of individuals liable to be exposed to this disease, but it is a procedure which has a very small but definite risk of serious complications. Changes in the prevalence of smallpox in countries overseas and the diminishing likelihood of the occurrence of outbreaks in this country, have prompted a re-assessment of the balance of risks involved in the currently recommended schedule of vaccination against the benefits that may be expected from it. During the past 5 years the Smallpox Eradication Programme of the World Health Organisation has made remarkable progress and so the chances of introduction of smallpox into Britain has substantially diminished and are likely to continue to lessen with the further progress of the eradication campaign. The British public are consequently far less likely to be exposed to infection with smallpox. At present, though vaccination is a safe and reliable method of protection against smallpox for the vast majority of persons, the number of serious complications in childhood, though few, is out of proportion to the risks to them in Great Britain.

In view of the above facts, the sub-committee expressed the unanimous opinion that vaccination against smallpox should not now be recommended as a routine procedure in early childhood. Vaccination is still necessary for travellers to and from areas of the world where smallpox is endemic or countries where eradication programmes are in progress and also to those health service staff who might, in the course of their duties, come into contact with a case of smallpox. Routine vaccination in Bolton was discontinued in August, 1971.

Rubella vaccination, which began in 1970, continued. Girls between the ages of 12 and 14 years were included in the scheme. The number of girls in this group immunised in school was 1,911. Ten girls attended their general practitioner, making a total of 1,921. This vaccination is now offered to girls in their first year at secondary school and the parents of 870 girls gave consent for immunisation which will be carried out in 1972.

Immunisation against tetanus was started in May, 1971. Patients who commenced a course of immunisation against tetanus when they attended the Casualty Department at the Bolton Royal Infirmary following an accident, were advised to continue the course either by arrangement with their own general practitioner or at a Health Department clinic. The number of appointments averaged between 100 and 135 and the attendance at each session was between 50 and 60.

The use of computer for record keeping and making appointments for immunisation which was started on 1st January, 1969, still carried on. In addition to the staff conducting the local authority's clinic, doctors from general practices are also participating in the scheme.

Vaccination Against Smallpox:

				Age in Years			Total
				Under 5	5 - 15	Over 16	
Primary vaccination	874	50	228	1,152
Re-vaccination	21	163	923	1,107
Total (1971)	895	213	1,151	2,259
Total (1970)	1,337	230	633	2,300

Hospital Staff vaccinated in accordance with Ministry of Health Circular 618/55:

Primary vaccinations	6
Re-vaccinations	59
Health Department staff vaccinated during the year							71

NUMBER OF PRIMARY VACCINATIONS UNDER 5 YEARS OF AGE:

1962	2,042	(cases of smallpox in country)
1963	124	
1964	560	
1965	793	
1966	902	
1967	1,107	
1968	1,121	
1969	1,103	
1970	1,310	
1971	874	

Vaccination Against Poliomyelitis:

Age Group	Numbers who have received three doses during 1971	Numbers who have received reinforcing doses during 1971
Born 1971	—	—
Born 1970	1,702	1
Born 1969	238	2
Born 1968	47	95
Born 1964/67	276	1,338
Others under 16 years ..	63	67
Others over 16 years ..	29	22
TOTALS: ..	2,355	1,525

Total number who have received 3 doses of Poliomyelitis vaccine since the scheme began 79,098

Total number who have received reinforcing doses since the scheme began 27,693

Vaccination against Measles:

The following table shows the number of children in each age group who were vaccinated during the year:

AGE GROUP	NO. VACCINATED
Born in 1970.. .. .	1,266
Born in 1969.. .. .	380
Born in 1968.. .. .	70
Born in 1964/67	79
Others under 15 years	<u>2</u>
Total	<u><u>1,797</u></u>

Source of Immunisation

	Primary Courses				Reinforcing Injections	
	Diphtheria only	Diphtheria and Tetanus	Triple Antigen	Tetanus	Triple Antigen	Diphtheria/ Tetanus and Tetanus only
No. of children immunised at Child Health Centres and by general practitioners at their surgeries	—	122	1,958	83	94	340
No. of children immunised in schools	—	207	—	150	—	1,106
TOTALS	—	329	1,958	233	94	1,446
GRAND TOTAL		2,520			1,540	

IMMUNISATIONS FOR CHILDREN UNDER 16 YEARS OF AGE

	Primary Courses						Re-inforcing injections						Totals
	Born 1971	Born 1970	Born 1969	Born 1968	Born 1964/67	Others under age 16	Born 1971	Born 1970	Born 1969	Born 1968	Born 1964/67	Others under age 16	
Triple antigen	-	1,677	231	33	13	4	-	1	2	52	33	6	2,052
Diphtheria/Whooping Cough	-	-	-	-	-	-	-	-	-	-	-	-	-
Diphtheria/tetanus ..	-	20	2	17	272	18	-	-	-	36	1,297	44	1,706
Diphtheria only	-	-	-	-	-	-	-	-	-	-	-	-	-
Whooping Cough only	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetanus only	-	-	-	5	183	45	-	-	-	1	10	58	302
	-	1,697	233	55	468	67	-	1	2	89	1,340	108	4,060

AMBULANCE SERVICE

A full service is given within the County Borough of Bolton and also on an agency basis for the Turton area of Lancashire. The total population served is now 174,000 and the area covered remains the same as last year. Accident and emergency cover is again provided for John Booth & Sons, Steelworks, which is situated on the Bolton/Westhoughton boundary.

General Review:

The movement of population from the central area of the Borough to the outlying districts means an increase in mileage and where flats have been erected instead of terraced dwellings, more time has to be taken in movement of patients, this being particularly noticeable on the geriatric day service with the ever increasing numbers of patients being conveyed to the Units. At the present time, to ease the pressure on remaining staff, 3 man and 2 man vehicles are used exclusively for this purpose and as the demand increases staffing will have to be reviewed.

It is pleasing to report that we have not been required to attend any accidents on the new motorway complex within the area and it is also worthy of note that the number of calls to road accidents has reduced slightly, but the works and home accident figure has risen. Training will be given to all crews in the use of Entonox machines as a means of relieving pain and with the continuance of advanced training to all staff at the Lancashire County Council School in the techniques of diagnosis and treatment of casualties, a high standard should be maintained. The increase of over 12,000 patients carried in the last four years with one vehicle less shows the extent of co-ordination and careful routing and usage of vehicles.

The following tables show the total mileage and the total numbers of patients carried, together with the average miles per patient during the last fifteen years.

Year	Total Mileage	Total Number of Patients Carried	Average Mileage per Patient
1957	158,270	49,583	3.19
1958	162,062	49,921	3.25
1959	162,542	49,626	3.27
1960	174,798	58,360	3.00
1961	173,571	56,316	3.08
1962	179,481	57,782	3.11
1963	165,590	54,207	3.05
1964	163,460	56,422	2.90
1965	166,946	60,070	2.78
1966	180,375	61,146	2.94
1967	180,372	59,861	3.02
1968	191,400	61,996	3.08
1969	204,742	63,650	3.21
1970	219,534	66,753	3.28
1971	229,750	72,567	3.17

Year	Bolton		Turton U.D.C		Total	
	Patients	Miles	Patients	Miles	Patients	Miles
1967	56,152	152,186	3,709	28,186	59,861	180,372
1968	58,024	160,161	3,972	31,239	61,996	191,400
1969	60,032	169,648	3,618	35,094	63,650	204,742
1970	63,448	189,467	3,305	27,717	66,753	219,534
1971	69,177	201,686	3,390	28,064	72,567	229,750

Patients Carried by Rail

	Patients Carried			Ambulance Vehicle Mileage		
	Stretcher Cases	Sitting Cases	Total Patients	Stretcher Cases	Sitting Cases	Total Patients
Bolton Borough	—	84	84	—	213	213
Turton U.D.C...	—	—	—	—	—	—
TOTALS: ..	—	84	84	—	213	213

Yearly Analysis of Work done by the Ambulance Service:

The following table gives details of the Ambulance and Sitting Case mileage and the stretcher, two handed and sitting case patients carried:

Bolton Patients Carried

Accident and Emergency				Other Cases				Total Patients Per Year
Stretcher	2 Handed	Sitting	Total	Stretcher	2 Handed	Sitting	Total	
2414	1267	1740	5421	5581	15185	42990	63756	69177

Miles Travelled

Accident and Emergency				Other Cases				Total Miles Per Year
Stretcher	2 Handed	Sitting	Total	Stretcher	2 Handed	Sitting	Total	
12605	5042	7564	25211	17647	40119	118709	176475	201686

AGENCY SERVICE FOR LANCASHIRE COUNTY COUNCIL IN AREA OF TURTON URBAN DISTRICT:

Patients Carried

Accident and Emergency				Other Cases				Total Patients Per Year
Stretcher	2 Handed	Sitting	Total	Stretcher	2 Handed	Sitting	Total	
143	40	86	269	485	775	1861	3121	3390

Miles Travelled

Accident and Emergency				Other Cases				Total Miles Per Year
Stretcher	2 Handed	Sitting	Total	Stretcher	2 Handed	Sitting	Total	
1169	468	702	2339	3472	5431	16822	25725	28064

Emergency Calls:

The Service handled 6,014 emergency calls in the year, an increase of 400 calls on the preceding year. It was decided that two men would be sent with the vehicles on all accident calls and whilst the response has been quite satisfactory, greater pressure has been felt in the Control Room in carrying out this procedure. Additional staff are to be recruited during the next financial year to meet this demand.

Bolton C.B.

Turton Area

Type of Case	Yearly Total	Type of Case	Yearly Total
Road Accidents	803	Road Accidents	57
Home or Works Accidents	2740	Home or Works Accidents	128
Collapsed Conditions	1878	Collapsed Conditions	84
Discharges from Hospital	1461	Discharges from Hospital	77
Admissions to Hospital	3871	Admissions to Hospital	342
Foot Clinic	560	Foot Clinic	4
Geriatric Day Cases	15982	Geriatric Day Cases	634
Transfer (Hospital to Hospital) ..	1340	Transfer (Hospital to Hospital) ..	14
Transfer (House to House)	37	Transfer (House to House)	2
Mental Cases	32	Mental Cases	—
Psychiatric Day Cases	6349	Psychiatric Day Cases	27
Maternity Cases	1787	Maternity Cases	141
Out Patients	32337	Out Patients	1880
	69177		3390

Vehicle Strength at 31st December, 1971:

The ambulance fleet consists of 12 vehicles:

- | | | |
|---|---|------------------------|
| 3 All-purpose
2 Stretcher
3 Dual-purpose
3 Sitting case
1 Car | } | Accident and Emergency |
|---|---|------------------------|

The 5 accident/emergency vehicles are equipped to deal with all types of case; the dual-purpose and car can be used for stretcher or sitting cases as the need arises. Careful planning is required where replacements are made and the need for additional vehicles is becoming more apparent.

Ambulance Control Room:

Any lowering of efficiency within the Control Room is quickly reflected on the rest of the Service so it is pleasing to report that a high standard has been maintained throughout the year. To conform to a Department of Health and Social Security directive, a complete re-organisation of radio telecommunication is planned over the next two years to give a better communication system and to give flexibility in liaison with neighbouring authorities in the

control of ambulance vehicles. The essential link with other emergency services is maintained within and out of normal working hours, e.g., rota doctor schemes for general practitioners, midwives, district nurses, hospital "Flying Squad", emergency oxygen and radio link with midwives and district nurse. Information is provided for "stand-by" Children's Officer, Mental Welfare Officer, Social Services Welfare Officer and Public Health Inspector on duty out of working hours.

Civil Defence:

In accordance with regulations in retaining Civil Defence instructors within local authorities, one member of the Ambulance staff is qualified for this duty.

Ambulance Vehicle Workshop:

The staff in workshops remains as 2 fitters and 1 labourer to deal with all ambulance and departmental vehicles. Repairs and maintenance are carried out on 26 vehicles. This is a very important part of the Service ensuring that ambulance vehicle availability is kept to a maximum.

PREVENTION OF ILLNESS, CARE AND AFTER-CARE

Health Education:

Health Education has continued to expand, especially in the secondary schools, as the value of health education as a preventive measure becomes increasingly recognised.

Mr. B. Sartain, the Health Education Officer, resigned in August, 1971 and was, unfortunately, not replaced until the end of the year. This left a considerable gap, in which other workers in health education found it more difficult to function efficiently. However, all members of staff involved in health education managed to maintain a framework on which the new Health Education Officer can build a forthcoming programme to meet the needs of the community.

Activities:

SCHOOLS:

The schools are making more demands on the Health Education Department, as this is an important facet of preparing pupils for adult life.

Eight health visitors have been teaching mothercraft to girls in secondary schools, leading up to the Red Cross Mothercraft examination, for which a diploma is awarded to successful candidates.

In addition to this, the Health Education Officer has been into 11 schools and 3 colleges this year to talk to the pupils on health education with special emphasis on the problems of drug abuse, smoking and alcohol, venereal diseases and contraception.

One primary school received a talk on dental health. The requests for talks on health education from secondary schools have completely absorbed the resources of the Health Education Department, making it almost impossible to offer a service to the junior schools in the town.

GENERAL:

- (1) A series of talks and films were given at Bolton Recreation Club on the theme of "Growing Up," and to workers in the youth service.
- (2) Church and Young Wives Clubs and other organisations have requested talks on health topics which have been given by staff of the Health Department as well as the Health Education Officer.
- (3) Duke of Edinburgh Award in Home Safety. Courses were continued in the instruction of candidates for the Duke of Edinburgh Bronze/Silver Awards in Home Safety.
- (4) Drugs: another successful teach-in on drug misuse was held, this time at Thornleigh College in conjunction with the Association for the Prevention of Addiction. It was well-supported with much interest from young people and those concerned in the welfare of young people.

MOTHERCRAFT:

Mothercraft talks continued to be given over an 8 week period at the clinics during afternoon sessions, with one evening session for those women who are at work during the day.

These talks, which are given by a health visitor and a midwife, cover relaxation and exercise for childbirth, foetal development, diet during pregnancy, preparation for baby, breast feeding, bottle feeding, sterilising bottles, bathing baby, importance of vaccination and immunisation.

PARENTCRAFT:

Three times during the year, a 5 week course of talks was given to expectant parents, at which the Health Education Officer, health visitor and midwife were present, and films were shown. These followed similar lines to the Mothercraft course but covered topics which interest the father, stressing his involvement.

IN-SERVICE TRAINING:

Films - new films have been shown regularly in the nurses' library, to health visitors, midwives and district nurses and other new visual aids as they become available such as tape/slide units.

A Study Day for district nursing staff was held in April at the Halliwell Health Centre; the theme was "Management and the Nursing Services" and "District Nursing Techniques".

A seminar for Local Authority Nursing Staff was held at the Bolton Medical Institute in May entitled, "The Changing Social World".

IMMIGRANTS:

Besides the expansion of the leaflet series in Urdu and Gujarati, we have several film loops with accompanying tapes which are used and succeed in communicating to mothers who cannot read. The difficulty now lies in persuading groups of immigrant mothers to come together to view these film loops.

SMOKING:

All schools which the Health Education Officer has visited have received anti-smoking talks and seen the cartoon film, "Dying for a Smoke".

VISUAL AIDS:

The selection of equipment and visual aids has continued to expand. As these are in constant use by the midwives, health visitors and public health inspectors, they have to be kept in good repair. The department is acquiring new films, film strips, film loops and tapes all the time in order to provide up to date material.

CONCLUSION:

One of the most important functions of the Health Education Officer is that of liaison, not only with the general public on matters of health, but with other members of staff within the Health Department and allied departments, so that they may be enabled to carry out effective health education teaching in their own field. While health education is required to provide this multiplicity of functions within the limits imposed by lack of staff, it is hardly possible to plan a comprehensive health education programme to meet the needs of the most vulnerable members of our community, nor to evaluate the effectiveness of our methods of communication.

Cervical Cytology and Cancer Screening:

The total number of tests diminished from 3,083 in 1970 to 2,168 in 1971, making an average of 21.5 per session as compared with 19.5 in 1970. The total number of smears taken in 1971 was 2,157 as compared to 3,065 in 1970, of which 15 were positive or suspicious smears against 17 in 1970. The total number referred to general practitioners for conditions other than cancer was 120 and again trichomonas infection was the most common cause. The number of women attending for breast examination only was 11, of which 8 were found to have a suspicious lump against 5 in 1970. The following table gives conditions discovered during the examination:-

Trichomonas infection	63
Monilia infection	35
Polyps	10
Fibroids	1
Inflammatory changes with abnormal squamous cells	1
Prolapse	1
? Pregnant	1
Suspicious lump in breast	8

The patients were asked to return for a smear in 3 years if no abnormality was found. A few cases were repeated earlier at the request of either the patient or the general practitioner. The total number of women who attended for a routine repeat smear in 1971 was 1,337 against 2,061 in 1970. Only 10 of these (0.75%) were positive or suspicious. Of the 691 new patients, 5 (0.73%) had positive or suspicious smears.

Summary of Age and Parity of Bolton Women who had smears taken

Age Group	New Patients			Routine Repeat Smears		
	No. examined	No. of positive or suspicious smears	Percentage of positive smears	No. of women examined	No. of positive or suspicious smears	Percentage of positive smears
Under 25	90	1	1.12	14	—	—
25-34 yrs.	258	1	0.35	339	4	1.20
35-44 yrs.	174	—	—	445	3	0.68
45-54 yrs.	109	1	0.92	360	2	0.56
55-64 yrs.	47	1	0.22	172	1	0.58
65 and over	13	1	0.83	7	—	—
TOTAL	691	5	0.73	1,337	10	0.75
Number of Pregnancies:						
0	86	2	2.32	52	—	—
1	172	—	—	285	1	0.35
2	237	—	—	524	5	0.95
3	114	1	0.88	286	3	1.04
4	41	1	2.44	100	1	1.00
5	20	1	5.00	49	—	—
6 and over	21	—	—	41	—	—
TOTAL	691	5	0.73	1,337	10	0.75

The follow up of positive or suspicious smears revealed that 5 were treated with cone biopsy, 4 had total hysterectomy, 1 had radium treatment, 2 had arc biopsy of the cervix, and 1 was treated for vaginal infection. In 2 cases, repeat smears did not show any malignant cells and they are followed up with routine smears. Of the 8 breast lumps, 1 had excision of lump the histology of which showed fibrocystic disease of the breast with a small area of fibro-adenosis - no evidence of malignancy was found. The rest remained under observation.

Geriatric Advisory Clinic:

This clinic, for patients of over 60 years of age, continued to be held on Wednesday mornings at the Civic Centre.

A total of 216 patients attended in 1971 as against 117 patients in 1970 and 109 in 1969.

Each patient received a leisurely examination in depth, followed by re-assurance and a written report to their general practitioner.

The sources of referral to the clinic in 1971 were as follows:-

Source of referral	1969	1970	1971
Chiropody clinic	75	06	108
Previous patients	17	22	18
Health visitors and district nurses	14	6	8
Talks at Over 60 Clubs	3	2	45
Press Publicity	-	-	36
General Practitioners	-	1	1
TOTAL	109	117	216

The age and sex distribution of these patients was:

Age	1969		1970		1971	
	Men	Women	Men	Women	Men	Women
Under 65	0	15	2	20	11	34
66-75	18	44	16	57	35	100
Over 75	10	22	4	18	8	28

The most frequent medical conditions found were obesity and hypertension. Six cases of mild anxiety states were found and two previously undetected cases of cancer of the breast.

As mentioned above, the family doctor was informed of the various findings, including the examination, blood test, cervical smear, blood pressure readings, etc. It was left to the general practitioner to initiate treatment. Should the doctor wish it, an early course of physiotherapy can be arranged. Chest cases can be X-rayed within 14 days at the Mass X-ray sessions at the Health Department.

Chiropody:

The demand for this service continues to increase and in the year an additional part-time chiropodist was appointed. In September, the health centre at Cannon Street was opened and a once weekly clinic is now being operated from there. Clinics are also held daily in the Health Department and one day per week at Halliwell Health Centre and Deane Clinic. There are 24 sessions held weekly. Details of the service are given in the tables below.

	1967	1968	1969	1970	1971
New Clinic Patients	504	636	624	633	629
New Domiciliary patients ..	256	358	324	252	297
Clinic Patients on Register at Year End	1,830	2,104	2,211	2,380	2,717
Domiciliary Patients on Register at Year End ..	553	580	734	720	734
Recall period	7 - 8 weeks	11 - 12 weeks	9 - 10 weeks	9 - 10 weeks	9 - 10 weeks

Table of Treatments given at the Foot Clinics over the Past 10 Years

Year	Number of treatments given at clinic				Total	No. of treatments given at home	Total clinic and home treatments
	Free			Paying			
	Aged	Handi-capped	Expectant Mothers	Aged			
1962	3,969	338	—	4,147	8,455	1,279	9,734
1963	4,372	343	—	4,112	8,827	1,592	10,419
1964	4,485	356	—	3,857	8,700	1,762	10,462
1965	4,018	353	—	3,306	7,677	1,748	9,727
1966	4,609	339	—	3,573	8,521	2,206	10,727
1967	4,493	460	—	3,561	8,514	2,825	11,339
1968	4,786	464	1	3,699	8,950	3,211	12,161
1969	5,263	453	—	4,039	9,755	3,820	13,575
1970	5,561	430	1	4,122	10,114	3,981	14,095
1971	6,176	459	2	4,203	10,840	4,588	15,428

MENTAL HEALTH

As a result of the Seebohm Report and subsequent legislation, the Mental Health Service was transferred to the newly formed Social Services Department in April, 1971, with the exception of Firwood Junior Training Centre, which received the status of a special school and became the responsibility of the Education Department.

This transfer involved the following establishments and their staff. Greenmount House and Annexe, Greenroyd Hostel, Cotton Street Adult Training Centre and Psychiatric Rehabilitation Unit and Park House Hostel. The Deputy Chief Mental Health Officer, the Mental Welfare Officers and the Welfare Assistants were also transferred to the new department. I should like to take this opportunity of expressing my appreciation for the excellent work done by all the staff of the Mental Health Department whilst they were part of the Health Department.

Medical liaison with the Health Department is still maintained by the Senior Medical Officer who works closely with her former colleagues, particularly in respect of mentally subnormal persons and the monthly clinic held at the Civic Centre by Dr. M. J. Sweeney, Consultant in Mental Subnormality, which has continued under the auspices of the Health Department. In addition, one of the department mental officers has been appointed factory doctor to the Cotton Street Centre.

PART III

CONTROL OF INFECTIOUS DISEASES

Notifiable Infectious Diseases

Tuberculosis

Venereal Disease

NOTIFIABLE INFECTIOUS DISEASES

Incidence:

The following table gives the number of cases of notifiable infectious diseases other than tuberculosis.

Disease	Total Cases Notified
Anthrax	—
Diphtheria	—
Dysentery	11
Acute Encephalitis	—
Typhoid Fever	—
Paratyphoid Fever	3
Malaria	1
Measles	48
Acute Meningitis	44
Ophthalmia Neonatorum	1
Acute Poliomyelitis:	
Paralytic	1
Non-paralytic	—
Scarlet Fever	86
Smallpox	—
Whooping Cough	37
Food Poisoning	30
Infective Jaundice	20
Tetanus	1

Other notifiable diseases are Cholera, Leprosy, Leptospirosis, Plague, Relapsing Fever, Typhus Fever and Yellow Fever. No cases of these diseases were notified in the year.

The following table gives the number of notifications of notifiable diseases after correction during each of the last ten years.

Disease	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Anthrax	—	—	—	—	—	—	—	—	—	—
Diphtheria	—	—	—	—	—	—	1	2	—	—
Dysentery	331	97	94	125	136	53	168	50	35	11
Acute Encephalitis	—	—	—	—	—	—	—	—	—	—
Enteric Fever	2	1	—	—	—	—	—	—	2	3
Malaria	1	1	—	—	—	—	—	—	—	1
Measles	576	2193	973	1591	1419	666	559	320	1276	48
Acute Meningitis	—	—	—	2	1	1	—	—	1	44
Ophthalmia Neonatorum	1	1	—	—	1	—	—	—	—	1
Acute Poliomyelitis:										
Paralytic	1	1	2	—	—	—	—	—	—	1
Non-Paralytic	—	1	—	—	—	—	—	—	—	—
Scarlet Fever	59	66	58	156	242	63	38	60	82	86
Smallpox	—	—	—	—	—	—	—	—	—	—
Whooping Cough	2	55	142	26	95	96	27	12	73	37
Food Poisoning	66	62	41	38	31	64	61	40	57	30
Infective Jaundice	notifiable	from June, 1968)					21	56	193	20
Tetanus	notifiable	from October, 1968)					—	—	1	1

Deaths from Infectious Diseases, 1962-1971 inclusive:

Disease	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Diarrhoea and Enteritis under 2 years of age ..	1	3	2	—	2	3	7	6	4	4
Meningococcal Infection ..	1	—	1	1	1	2	1	—	—	4
Pneumonia	122	146	90	115	134	102	141	170	185	167
Whooping Cough	—	—	—	—	—	—	—	—	1	—

All the deaths from infectious disease have been in these four groups during the past ten years.

Diphtheria:

For the second successive year there were no cases of diphtheria in Bolton. The rate of immunisation against the condition is still not high enough to ensure that this state of affairs will continue. In spite of the use of the computer in the immunisation programme, the percentage of children protected against the condition is still below the level needed to ensure that diphtheria will not return to Bolton. Carriers are present in the community and these constitute a danger to children who have not been immunised.

Computerisation started at the beginning of 1969 and the following table seems to indicate that there is no improvement in the immunisation figures.

Year of Birth	No. of Children Born in Year	Number Immunised against Diphtheria in Year of Birth and subsequent two years	Percentage Immunised
1965	2,785	1,885	67.7%
1966	2,685	1,879	69.9%
1967	2,800	2,010	71.8%
1968	2,711	1,791	66.0%
1969	2,701	1,807	67.0%
1970	2,622	1,697*	68.7%

* Figures for the years 1970 and 1971 do not include children completing the primary immunisation course in 1972.

Dysentery:

The number of cases continues to decline and only 11 were notified during the year. This seems to indicate a change in the nature of the infecting organism when comparison is made with figures from previous years. In 1954 there were 615 notifications, the figures for 1956 were 851 and there were 509 cases in 1961.

Gastro-enteritis of Infancy:

Four children under the age of two years died with this disease during the year. This continues to show the trend which has continued for the last four years in which certain serological types of Escherica Coli appear to have assumed a more virulent nature. There was no generalised outbreak of enteritis in the area and the deaths were isolated cases.

Meningitis:

During the year 44 cases of meningitis were notified and four of these infections resulted in death. In comparison 6 notifications had been made in the previous ten years. A further 23 cases of meningitis were recorded in the Lancashire County Council area surrounding Bolton in 1971 with four deaths, the majority of the cases being near the Borough boundary.

The outbreak started in Bolton at the beginning of the year with most of the cases being due to organisms of the meningococcus group B and occurring mostly in young children under the age of three years. With the continuance of cases in the spring, when the numbers normally become very low, it was decided, in consultation with representatives of the Public Health Laboratory, the Department of Health and Social Security, the local Group Consultant Pathologist and the Consultant Paediatrician, that a sulphonamide should be given to the close contacts of each case. Investigations in the district had shown that 40% of the contacts were symptomless throat carriers of the disease.

After a reduction in the number of cases in the summer months, it was found that there was a further increase in the late autumn and winter. It appeared that this increase was continuing into 1972 and at the end of the year the outbreak was far from controlled.

Investigations into each case were made by both the local health departments and the Manchester Public Health Laboratory to see if there was a possibility of a change in virulence of the organism responsible for the disease, or if the level of immunity (as measured by the level of antibodies) in the community was declining.

Meningococcal meningitis is a very difficult disease to control with the high carrier rate in the community making any young children with little natural resistance susceptible to contract the condition. The number of cases nationally had increased over the last few years but not in any comparable way to the Bolton outbreak. It is hoped that giving sulphonamide to family contacts may eventually help to reduce the incidence of the disease.

Brucellosis:

The disease is transmitted by contact with infected animals or by the ingestion of milk from these animals. Pasteurisation of milk will prevent the illness being passed in this media. The disease is not notifiable but at least two people in Bolton had treatment for brucellosis in 1971.

A voluntary scheme for the prevention of the disease was put into operation in October, 1966. When the condition is discovered in a cow the animal is removed for slaughter and pasteurisation of the milk takes place until tests for brucellosis (by milk agglutination test) are negative.

The number of cows slaughtered was:

1966 (for 3 months)	4
1967	10
1968	25
1969	18
1970	26
1971	22

On November 1st, 1971, compulsory eradication was started in three areas of Great Britain under which owners will be required to slaughter animals which react to the official tests and are paid a flat rate replacement grant in addition to the carcase value for each animal dealt with in this way.

In the year, 945 samples of milk (from bulk and individual samples) were taken from roundsmen and farms and examined for brucella abortus. Positive reactions from farms outside Bolton were referred to the County Medical Officer of Health.

Measles:

Only 48 cases of measles were notified and this is the lowest figure in Bolton since the condition first became notifiable. The disease could be virtually eradicated with adequate immunisation. All children in the second year of life are eligible for vaccination and only 8 cases were in children before their first birthday. After the low figures in 1971, it will be anticipated that more cases will be found in 1972 and at least five per cent will be left with some permanent disability such as ear disease due to the condition. This is very tragic when the means to prevent this are in our hands.

Whooping Cough:

The number of cases dropped from 73 in 1970, to 37 in 1971. It appears that the disease is becoming difficult to eradicate with reports that some of the antigenic strains of the organism are unaffected by existing vaccines.

Poliomyelitis:

After eight years in which the town experienced a period of freedom from disease, a boy of two years was admitted to hospital with the condition. He had not been immunised against poliomyelitis. He developed partial paralysis of one of his legs but this started to improve with treatment and it is hoped that he will have little residual disability. Contacts of the boy were surveyed and immunised.

Scarlet Fever:

Eighty six cases of the illness were notified. As in recent years, the disease continued to be in a mild form.

Pneumonia:

One hundred and sixty seven people died from pneumonia. It is a leading cause of death in the very young and very old. Eleven of the deaths were in children under the age of 5 years and one hundred and nine in people over the age of 65. In the latter group it is often a complication of some other potentially terminal condition.

Enteric Fever:

Three cases of paratyphoid fever occurred in the year, two of them apparently having been contracted abroad.

In October a man was admitted to hospital with the disease after returning from a holiday in West Pakistan. The condition responded to treatment and no spread was found in the contacts who were surveyed.

Also in October a woman was admitted to hospital when it appeared that she was developing a diabetic coma. Tests showed that paratyphoid fever was complicating the condition. She died two days after admission but it was thought that the main cause of death was diabetes, rather than paratyphoid. The woman had never been abroad in her life and tests in contacts failed to disclose the source of infection.

In November a woman developed intestinal symptoms after returning from a holiday in Bahrain and tests showed that these were due to paratyphoid fever. Examination of contacts showed that her husband (who also went on holiday with her) also had the disease, but as he had gone to stay with his parents in another local authority area, the notification was not made from Bolton. Both recovered completely after treatment.

Infective Jaundice:

Twenty cases were notified in the year compared with one hundred and ninety three in the previous year. Most of them were in children and young adults.

Food Poisoning:

Thirty notifications of this condition were made in the year and this gave the lowest figure since 1950. This is fairly satisfactory when the continued extension of communal feeding is considered. The cases were mainly in three outbreaks.

The first occurred after a children's birthday party with several of the children becoming ill next day and a few adults also being affected. The only food that had been consumed by all the victims was the icing on the birthday cake, but tests failed to show that any organisms were present in some of the icing sent for bacterial examination.

A coach party from a town in Cheshire visited a theatre in Bolton and had a buffet supper afterwards. Next day many of the party became ill as did four of the theatre company who had eaten the remains of the supper. Food samples sent from the caterer's premises in Ramsbottom failed to show any abnormality.

At one of the Welfare Homes both members of the staff and some of the residents developed intestinal symptoms, but tests again failed to disclose any definite aetiology.

General Administration of the Control of Infectious Diseases:

Public Health Inspectors carried out 108 visits and health visitors 94 visits to make enquiries concerning infectious diseases.

The number of specimens sent for examination to the Department of Pathology was 706. The types of specimens examined and the results obtained are shown in the following table:

Type of Specimen	Pathogenic Organism Found	No. of Specimens
Faeces	Salmonella typhimurium	5
	Salmonella montevideo	2
	Unidentified Salmonella	3
	Salmonella paratyphoid B	2
	Negative results	648
Urine	Negative results	46
	TOTAL	706

During the year no notices were issued under the Public Health (Infectious Diseases) Regulations, 1953 (these are concerned with suspending people from work until tests indicate that they are free from infection).

The following table shows the number of persons to whom special attention was directed in view of the fact that their occupation involved a higher risk of infection to others.

Category	Examinations for		
	Sonne Dysentery	Salmonella Infections	Other Intestinal Infections
FOOD HANDLERS			
Positive	—	4	—
Negative	1	13	19
NURSERY STAFF			
Positive	—	—	—
Negative	1	1	1
NURSING AND HOSPITAL STAFF			
Positive	—	—	—
Negative	—	—	2
SCHOOL STAFF			
Positive	—	—	—
Negative	—	3	—
HOME HELP			
Positive	—	1	—
Negative	—	—	9
TOTALS ..	2	22	31

I wish to thank the staff of the Pathological Laboratory at the Bolton Royal Infirmary for their help in examining specimens and in the interpretation of the findings. Much work was also done by the Public Health Laboratory in Manchester.

TUBERCULOSIS

Notifications:

AGE AND SEX DISTRIBUTION OF NOTIFIED CASES:

Respiratory Tuberculosis

Age Periods	0-	1-	2-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	Total (all ages)
Males (European)	-	-	1	-	1	-	1	-	1	-	7	-	3	14
Females (European)	-	-	1	-	1	1	1	1	-	1	-	1	-	7
Males (Asian)	-	-	4	1	6	7	3	5*	3*	2	1	-	-	32
Females (Asian)	1	-	1	1	1	5	5	2*	1	-	-	-	-	17
TOTALS	1	-	7	2	9	13	10	8	5	3	8	1	3	70

Non-Respiratory Tuberculosis

Age Periods	0-	1-	2-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	Total (all ages)
Males (European)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Females (European)	-	-	-	-	-	-	-	-	-	1	1	-	1	3
Males (Asian)	-	-	-	1	1	5	6	5	3	2	-	-	-	23
Females (Asian)	-	-	2	-	1	-	5	3	2	2	1	-	-	16
TOTALS	-	-	2	1	2	5	11	8	5	5	2	-	1	42

*Two males (Asian) and one female (Asian) notified also as non-respiratory tuberculosis.

The number of cases on the Tuberculosis Register at the end of the year was 254.

	MEN	WOMEN	CHILDREN	TOTAL
Respiratory Tuberculosis	83	42	34	159
Non-Respiratory Tuberculosis	40	37	18	95
	123	79	52	254

Deaths:

Respiratory Tuberculosis

Age Periods	0-	1-	2-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	Total (all ages)
Males (European)	-	-	-	-	-	-	-	-	-	-	-	-	2	2
Females (European)	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Males (Asian)	-	-	-	-	-	1	-	-	-	-	-	-	-	1
Females (Asian)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS	-	-	-	-	-	1	-	-	-	-	-	1	2	4

Non-Respiratory Tuberculosis

One female (European)

Summary of Work at Chest Clinic:

	1970	1971
Number of new cases notified	105	112
Number of deaths	10	5
Number of attendances of new cases	493	441
Number of cases referred from Mass Miniature Radiography Units	198	149
B.C.G. Vaccinations	380	290
Total attendances at clinic	1785	1681
Number of contacts examined	399	421

General Comment:

There were 112 new cases of tuberculosis notified during 1971, 7 more than last year. Five patients died of tuberculosis during the year.

There are no patients with persistently positive sputa.

During the year, 290 B.C.G. vaccinations were carried out at the Chest Clinic.

I should like to thank Dr. John Mitchell, Consultant Physician, for providing the above information.

The following table shows that although there were more cases notified during 1971, the percentage among immigrants has decreased slightly.

Year	Number of Tuberculosis notifications		Total	% Immigrants
	Boltonians	Immigrants		
1967	26	20	46	43
1968	40	45	85	52
1969	26	63	89	71
1970	20	85	105	81
1971	24	88	112	79

Although there has been an increase in the number of notified cases, the death rate is less than in 1970.

NOTIFICATIONS:				1930	1951	1970	1971
Respiratory	83	124	66	70
Non-Respiratory	27	29	39	42
TOTAL				100	153	105	112
DEATHS				82	48	10	5

Care and After-Care of Patients Suffering from Tuberculosis:

Close co-operation between the Health Department and Chest Clinic staff has continued as in previous years. The increase in the number of notified cases from 105 to 112 led to a great increase in activities in this field. A health visitor and two nurses attended sessions at the Chest Clinic.

After-Care Panel:

The After-Care Panel consists of a medical officer from the Health Department, a representative of the Housing Department, the health visitor who works in the Chest Clinic and the Area Nursing Officers. Meetings are held as and when necessary, usually every three months. The social problems, particularly the housing conditions of all patients discharged from hospitals and all patients notified between meetings, were reviewed by the Panel and where necessary rehousing was initiated.

Other After-Care Activities:

In 1971, district nurses cared for 39 respiratory and 19 non-respiratory tuberculosis patients and gave 3,300 treatments, mainly injections of streptomycine. The health visitor paid 695 visits to tuberculosis patients. She advised on treatment and in general contributed to the health education of the patient and his family during the visit. It was also an opportunity for contact tracing and for tuberculin testing of small children found in the household. On her return visit to read the result of the Heaf test, she was often accompanied by a medical officer in the department who performed the B.C.G. vaccination if necessary.

Contact Clinic:

Special evening clinics were held monthly or two monthly if necessary, at which contacts of known cases of tuberculosis were X-rayed. If the films indicated further investigation was necessary, the patients were seen at the Chest Clinic by a consultant. The number of patients attending the Contact Clinic in 1971 was 421, compared with 399 in 1970 and 323 in 1969.

B.C.G. Vaccination:

Contacts of recently discovered cases of tuberculosis, mainly children under school age, were Heaf tested. Those with negative reactions and also all newborn babies who were contacts, received B.C.G. vaccine. Two hundred and ninety children received B.C.G. at the Chest Clinic and 292 babies born to immigrant mothers received their vaccination in the maternity homes and maternity wards of Bolton District General Hospital.

B.C.G. Vaccination of School Children:

School children in their thirteenth year, if their parents consented, were given tuberculin tests and the negative reactors, 1,576 in number, were given B.C.G. vaccine. The result of this work is summarised in the following table:

Total No. of consents received	1,867
No. of children skin tested	1,823
No. absent for skin test	44
No. absent for reading	97
No. found positive	150
Positive reaction ..	109
Strong positive reaction	41
No. found negative	1,576
No. given B.C.G.	1,576

Year	Total No. of Children	No. Positive	% Positive
1967	1,859	233	12.0
1968	1,950	322	16.5
1969	1,815	166	9.2
1970	1,772	149	8.4
1971	1,726	150	8.7

School Children with Positive Tuberculin Tests:

In accordance with the Second Report of the Medical Research Council's Tuberculosis Vaccines Clinical Trials Committee, recommending the follow-up of school leavers found to have strong positive reactions to tuberculin tests, 41 appointments were made to X-ray such children as against 54 appointments in 1970. No new cases were found.

Mass Miniature Radiography Survey in Bolton:

I am indebted to Dr. J. I. Capper, Medical Director of No. 1 Mass Radiography Unit, for providing the following information:-

“With a reduction of the Mass Radiography Service of about 60% during 1969, in the region, the work of the Unit has had to be progressively altered. We are no longer able to visit factories on a rotational basis in the town and now confine our attention to those with a high percentage of immigrant labour or a high dust problem; the process of industrial notification of tuberculosis has been implemented to help us in this matter. At the same time, general practitioner referral sessions were started fortnightly at the Civic Centre and here we X-ray cases referred by general practitioners and the local health authority, i.e., school teachers, people in contact with children and recent immigrants to the country. In this way we have endeavoured to make the Unit capable of coping with the problems arising in the town of Bolton.

It will be noticed that the number of people attending the general practitioner referral sessions increased by just over 1,000 in 1971, against 1970 and similarly the cases of tuberculosis rose from 21 to 26 (18 immigrants). The latter figure represents a tuberculosis rate of 6.10 per 1,000. The overall tuberculosis rate as far as the work in Bolton is concerned is 2.80 per 1,000 which is much higher than the national average (0.5 per 1,000 approx.).”

The following table gives the General Practitioner/Medical Officer of Health Referral Sessions and the Industrial Surveys/General Public Sessions figures for 1970 and 1971.

Type of Session	No. X-rayed		No. of Cases		Rate/1,000	
	1970	1971	1970	1971	1970	1971
General Practitioner/ M.O.H. Referral Session	3,183	4,260	21 (17 immigrants)	26 (18 immigrants)	6.60	6.10
Industry and General Sessions	8,576	5,724	6 (2 immigrants)	2 (immigrants)	0.70	0.34
TOTALS	11,759	9,984	27	28	2.30	2.80

As the following table shows, open surveys have produced fewer and fewer cases. In 1971 not one case of tuberculosis requiring close clinic supervision or treatment was found and the time has clearly come to consider whether or not these open sessions should continue.

Open Survey Cases - Rate/1,000 X-rayed:

	1968	1969	1970	1971
Tuberculosis requiring close clinic supervision or treat- ment	1.5	1.11	0.70	0.0
Tuberculosis requiring only occasional out-patient supervision	0.5	0.45	0.70	0.2

VENEREAL DISEASE

Dr. Philip S. Silver has supplied the following information which relates to Bolton residents only in attendance at his clinic.

“Five cases were referred from the Moral Welfare and Ante-natal Clinic. There were four sent from the Children’s Department and one patient from the Family Planning Clinic. The Clinic staff carried out 65 visits for the purpose of ascertaining the cause of non-attendance.

Gonorrhoea:

Due to a change in the standard therapy at the clinic, the number of insensitive strains to Penicillin and Tetracycline have been reduced in the Bolton area. Of the total number of Bolton cases attending the Clinic, 205 males (23.6%) and 88 females (10.1%) were suffering from gonorrhoea.

The following table shows the age and sex breakdown of these patients:

Age Groups	Males	Females
14 – 18 years	5.2%	19.3%
19 – 20 years	12.1%	19.3%
21 – 24 years	21.9%	37.5%
25 and over	60.6%	23.9%

In distinction to last year, there has been an increase in the 21 - 24 age group of female cases of gonorrhoea of 37.5% as against 18% in 1970. It is still vitally important that the public should be made aware of female asymptomatic carriers of gonorrhoea. One baby born in Bolton District General Hospital developed gonococcal ophthalmia neonatorum. We had a boy of 14 years with gonorrhoea and three girls aged 15 likewise infected. Because of the high carrier rate in the community, it is of the utmost importance that the medical and nursing members of the community should be on the look out for ophthalmia neonatorum”.

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Syphilis	10	14	16	10	7	20	4	4	7	1	7	5
Gonorrhoea ..	74	123	72	46	64	93	157	182	235	205	212	293
Non-Venereal Diseases ..	320	348	349	352	335	407	310	413	401	470	438	569
TOTALS ..	404	485	437	408	406	510	471	599	643	676	657	867

PART IV

ENVIRONMENTAL HYGIENE

Work of the Chief Public Health Inspector

Slum Clearance

Clean Air

Inspection and Supervision of Food

General Sanitation

Disinfection and Disinfestation

Report of the Borough Analyst

WORK OF THE CHIEF PUBLIC HEALTH INSPECTOR

New Extension of Abattoir:

The new extension together with alterations to comply with regulations governing meat export licences at the Bolton abattoir were nearing completion at the close of the year.

Control of Feral Pigeons and Starlings:

The methods used for controlling wild birds in the Town Centre are proving to be effective.

Some of the trees in the Victoria Square were enveloped in artificial cob-webbing and most of the starlings have gone to roost elsewhere.

The use of mobile alternating intermittent flashing lights to persuade wild birds to leave the roofs of town centre buildings is commencing and birds seem now to be frequenting the trees at the rear of the Civic Centre; so far there is no public nuisance.

The cage-trapping of pigeons in the town centre continues to reduce the number of feral pigeons.

Brucellosis:

In November the Government commenced area eradication of Brucellosis in addition to the existing voluntary schemes for the production of Brucella free milk which have worked so well in Bolton (further details of which are on page 104). It is hoped that these schemes will be as successful as the measures which led to the eradication of tuberculosis in cattle.

Staff:

The staff of the public health inspectors' section is as follows:

- Chief Public Health Inspector
- Deputy Chief Public Health Inspector
- 5 Senior Public Health Inspectors
- 7 Public Health Inspectors
- 2 Inspectors of Meat and other Foods
- 2 Authorised Meat Inspectors
- 2 Technical Assistants
- 1 Pest Control Officer
- 4 Pupil Public Health Inspectors

SLUM CLEARANCE

Clearance Areas and Compulsory Purchase Orders:

Since the start of the Council's Slum Clearance Programme (November, 1955) 7,260 houses have been demolished by way of compulsory purchase order or individual unfit house procedure.

There have been 5,307 families rehoused from these premises.

During the year 1971, there were 693 houses demolished and 407 families rehoused under the provisions of the Housing Acts, 1936 - 1969.

The areas dealt with were as follows:

Bradford Ward Nos. 12 to 21 (Pilkington, Shaw and Hammond Street Areas).

Derby Ward Nos. 19 to 23 (Bamber, Hector and Defence Street Areas).

Halliwell Ward Nos. 8 and 9 (Wapping Street and Broughton Street Areas).

Derby Ward Nos. 12 to 18 (Commission Street Area).

Derby Ward Nos. 24 to 27 (Rumworth Street Area).

West Ward No. 26 (Snowden Street Area).

West Ward No. 27 (Gladstone Street Area).

Derby Ward Nos. 28, 29 (Washington Street Area).

Bradford Ward Nos. 28 to 30 (Grecian Street Area).

Bradford Ward Nos. 23 to 27 (Venture Street Area).

Confirmed Clearance Areas:

A public inquiry in connection with the Bolton (Bradford Ward Nos. 23 to 27 Clearance Areas) Compulsory Purchase Order, 1970 (Venture Street Area), held on the 2nd February, 1971, was confirmed with slight modification on the 17th May, 1971. Three applications for well-maintained payments were approved by the Secretary of State for the Environment.

The Bolton (Halliwell Ward No. 10 Clearance Area) Compulsory Purchase Order, 1971 (Eskrick Street South) was confirmed on the 19th November, 1971, without modification. A public inquiry was not necessary as the only objection made was withdrawn. The Clearance Area was represented to the Housing Committee on the 15th March, 1971. The Compulsory Purchase Order contains eleven unfit houses. Nineteen persons will require rehousing.

Other Clearance Areas:

On the 17th August, 1971, a public inquiry was held in connection with the Bolton (Bradford Ward Nos. 28 to 30 Clearance Areas) Compulsory Purchase Order, 1970 (Grecian Street Area). The decision of the Secretary of State for the Environment is awaited.

On the 11th January, 1971, twenty nine unfit houses including five houses with shops or other businesses and a disused beer house in the Kay Street Clearance Area were represented to the Housing Committee. Subsequently the Bolton (East Ward Nos. 21 and 22 Clearance Areas) Compulsory Purchase Order, 1971 was made and submitted to the Secretary of State for the Environment. A public inquiry was held on the 2nd November, 1971. In addition to the unfit properties in the clearance area, this order includes two other properties and a plot of land. The decision is awaited. Sixty seven persons will require rehousing.

On the 11th January, 1971, two hundred and ninety two unfit houses (including nineteen houses with shops or other businesses) in the part Gibbon Street Clearance Areas were represented to the Housing Committee. Subsequently the Bolton (Derby Ward No. 30 Clearance Area) Compulsory Purchase Order, 1971 was made and submitted to the Secretary of State for the Environment. A public inquiry was held on the 2nd November, 1971. In addition to the unfit properties in the Clearance Areas this Order includes thirteen other properties and a plot of land. The decision is awaited. Eight hundred and sixty nine persons will require rehousing.

On March 15th, 1971, one hundred and twenty eight unfit houses (including four houses and shops) in the Craddock Street area, were represented to the Housing Committee. Subsequently the Bolton (East Ward No. 23 Clearance Area) Compulsory Purchase Order, 1971 was made and submitted to the Secretary of State for the Environment. A public inquiry is to be held on the 25th January, 1972. In addition to the unfit properties in the area, this Order includes six other properties and several plots of land and some garages. Three hundred and sixty six persons will require rehousing.

The following clearance areas have been represented to the Housing Committee, during the year. The table indicates the Compulsory Purchase Orders which will be submitted to the Secretary of State for the Environment:-

Name of Clearance Area	Compulsory Purchase Orders to be made	Date represented	No. of properties		Persons to be rehoused
			Unfit (Pink)	Others (Grey)	
Bury Road	Bolton (East Ward Nos. 24 and 25 Clearance Areas) Compulsory Purchase Order, 1972	3.6.71	112	18	337
Leicester Street North	Bolton (West Ward No. 28 Clearance Area) Compulsory Purchase Order, 1972	12.7.71	181	14	541
Bayley Street	Bolton (West Ward No. 29 Clearance Area) Compulsory Purchase Order, 1972	13.9.71	29	—	65
Haworth Street	Bolton (West Ward No. 30 Clearance Area) Compulsory Purchase Order, 1972	13.9.71	72	6	228
Viking Street	Bolton (Great Lever Ward Nos. 2 to 4 Clearance Areas) Compulsory Purchase Order, 1972	6.12.71	45	3	149
Proffitt Street	Bolton (Derby Ward No. 31 Clearance Area) Compulsory Purchase Order, 1972	6.12.71	39	—	116
Bright Street	Bolton (Rumworth Ward Nos. 6 & 7 Clearance Areas) Compulsory Purchase Order, 1972	6.12.71	117	17	263

In accordance with the Council's Clearance Programme inspections were commenced in the Egerton Street and the George Street, Whittaker Street Clearance Areas.

General:

A survey of 1,003 houses was carried out to estimate the probable number of unfit houses to be dealt with after 1974. Subject to sampling errors as indicated by the Department of Environment, the estimated figure from local knowledge of the Chief Public Health Inspector is 1,770 unfit houses.

Pilot surveys and other inspections of houses were carried out during the year in connection with general improvement areas, improvement grants, house purchase loans and future additions, proposed for the clearance programme.

Plans and reports were prepared in co-operation with other departments of the Corporation in respect of redevelopment and other matters concerning slum clearance.

A considerable amount of work is involved in the Public Health Inspectors Housing Section preparing working maps, preparation of papers for representations and evidence for public inquiries in connection with clearance areas.

Inquiries from Purchasers of Houses:

Numerous inquiries at the Health Department continue to be made by persons interested in house purchase. The Inspectors gave information on the existing slum clearance programme to 551 inquirers during the year. The number of inquiries regarding land charges received from potential purchasers of properties within the Borough was 4,036.

Advances for House Purchase:

In connection with advances for house purchase, the Borough Treasurer requests the advice of the Health Department as to whether or not the houses concerned have a life of less than ten years. This information is based on the Corporation's approved programme and the opinion of the Chief Public Health Inspector.

Improvement and Standard Grants:

The following information has been supplied by the Borough Planning Officer in respect of the year 1971 :-

Number of applications received	838
Number of applications approved	754
Number of applications refused	23
Number of applications cancelled	40

The Borough Planning Officer states that in all cases applicants are interviewed, and where possible inspections are carried out, so that advice can be given prior to the application being made, to avoid the necessity for the refusal of applications. In addition, the Borough Planning Officer requests the advice of the Health Department in all cases as to whether or not houses concerned are likely to have a life of not less than 10 years. Such information is, of course, merely in the nature of a provisional estimate based on the Chief Public Health Inspector's appreciation of the situation, as the Corporation's approved programme of slum clearance did not, at the end of 1971, extend beyond 1974.

Certificates of Disrepair - Rent Act, 1957:

During the year no applications were received under this legislation.

Housing Statistics:

HOUSES NOT INCLUDED IN CLEARANCE AREAS:

Action was taken under the appropriate enactments as follows:-

NEW ACTION:

Houses represented under Section 16 of the Housing Act, 1957 ..	66
Demolition Orders made	21
Closing Orders made	24
Closing Orders converted to Demolition Orders	5

COMPLETED ACTION:

Houses demolished	9
Persons rehoused	11
Houses closed	24
Persons rehoused	50
Cases outstanding at close of year	32
Closing Orders rescinded	2
Houses incorporated into slum clearance areas before Order made	3
Houses subject to Closing Orders demolished in Compulsory Purchase Orders	25

Housing Inspections:

INSPECTION OF DWELLING-HOUSES

1. Dwelling-houses inspected for housing defects (under Public Health Act or Housing Acts) 2,133
Inspections made for the purpose 7,233
2. Dwelling-houses (included under sub-head (1) above) which were inspected under the Housing Consolidated Regulations, 1925 as amended by the Housing Consolidated Amendment Regulations, 1932 624
Inspections made for the purpose 624

REPAIRS - INFORMATION ACTION

Unfit or defective houses rendered fit as a result of informal action by the Local Authority under the Public Health or Housing Acts 153

ACTION UNDER STATUTORY POWERS

PUBLIC HEALTH ACT, 1936:

Houses in which defects were remedied after service of formal notices:

By owners	59
By Local Authority in default of owners	38

HOUSING ACT, 1957:

No action was taken under sections 9 or 10.

CLEAN AIR

Measurement and Investigation of Atmospheric Pollution:

The measurement and study of atmospheric pollution was continued during the year. There was no change in the location of the eight volumetric air sampling instruments situated in a geographical pattern designed to secure a fair average sample of the pollution in the developed part of the Borough.

Smoke control in Bolton began when the Town Centre Smokeless Zone became operative towards the end of 1954. The first smoke control order under the Clean Air Act, 1956, was made in 1958. The following table shows the daily average (all sites) of smoke and sulphur dioxide (in micrograms per cubic metre of air) for the year 1954, and the years 1958 onwards.

Year					Smoke					Sulphur Dioxide
1954	251	256
1958	289	262
1959	282	288
1960	281	219
1961	243	218
1962	196	219
1963	187	236
1964	143	203
1965	161	179
1966	164	163
1967	162	147
1968	153	153
1969	156	148
1970	118	147
1971	125	131

The above table can be interpreted as follows:-

(a) Smoke pollution has been halved since 1954.

(b) Sulphur dioxide pollution has been reduced by almost a half since 1954.

Refuse Incinerator:

Towards the end of 1971, news of the likely increase in the use of non-returnable plastic bottles for milk led to some concern in connection with the incineration of refuse at the new Incinerator at Raikes Lane, Bolton. Reports were later submitted to the Technical Services Committee by the Cleansing Superintendent and Chief Public Health Inspector dealing with the cleansing and public health acts respectively of this possible new development.

Two additional monitoring sites, using volumetric instruments, are to be set up to measure possible pollution from the burning of plastic materials at the Incinerator.

Installation of Furnaces:

Eleven notifications relating to the installation of 12 furnaces were made in accordance with section 3 of the Clean Air Act, 1956.

Five applications were received in accordance with section 6 of the Clean Air Act, 1968, all of which were approved.

Clean Air Act, 1956 - Section 16; Clean Air Act, 1968 - Section 1:

Verbal and written notices under Section 30 were given in respect of 5 instances of burning materials in the open air. No legal proceedings were necessary.

Alkali, etc., Works Regulation Act, 1906:

At the beginning of 1971, five premises were registered under the Act, i.e.:-

Electricity generating station	1
Iron and steel manufacturers	2
Aluminium manufacturer	1
Chemical manufacturer	1

During the year, one of the iron and steel manufacturing processes, and the aluminium manufacturing process, were de-scheduled, and these processes thereafter became the responsibility of the Corporation (Alkali, etc., Works Order, 1971).

During the year, the demolition of the gas works was completed.

It is again pleasing to record continued close co-operation with the Alkali Inspectors, whose advice and assistance are always readily available when required, including advice on matters outside their own official province.

Smoke Control Areas:

The following table shows the smokeless zone and smoke control orders made by the Town Council under the Bolton Corporation Act, 1949 and the Clean Air Act, 1956, respectively, up to the end of December, 1971:-

SMOKELESS ZONE (TOWN CENTRE):

Acreage	86	} 3,075 acres
Premises	1,050	

SMOKE CONTROL AREAS:

Acreage	2,989	} 23,793 premises
Premises	22,743	

At the end of 1970, the Town Centre Smokeless Zone and 18 Smoke Control Orders were temporarily suspended, and a further 4 Smoke Control Orders were postponed for one year; the suspended orders came back into operation on the 1st April, 1971 and the postponed orders on the 1st July, 1971; all occupiers in these areas were circularised to remind them that the suspensions or postponements had ceased, and that the orders were fully operative.

During 1971 the following smoke control orders were made:-

RUMWORTH NO. 2:

Acreage	86.6 acres	} 139 acres
Premises	1,466	

BRADFORD AND DERBY WARDS:

Acreage	52.4 acres	} 1,881 premises
Premises	415	

All householders in these two areas were circularised and supplied with literature regarding various aspects of smoke control, and arrangements have also been made for the mobile exhibition of the Solid Smokeless Fuels Federation to be stationed within the Rumworth No. 2 area for four days in February, 1972.

When making the Bradford and Derby Wards, and Rumworth No. 2 smoke control orders, the Town Council also imposed a "designation" in respect of improved open inset coke grates, i.e., "all-night burners", the effect of which was to preclude payment of grant in respect of the installation of such appliances. Following representations from the Solid Smokeless Fuels Federation, in which explicit assurances as to adequacy of solid smokeless fuel supplies were given, the "designation" was subsequently withdrawn by the Town Council in respect of the Rumworth No. 2 smoke control order. Towards the end of 1971, however, the Department of the Environment again questioned the Council's policy regarding "designation" of all-night burners, with particular reference to the Bradford and Derby Wards area, and in consequence, the Health Committee at their January, 1972 meeting, rescinded the "designation" in respect of that area; the recission was subsequently confirmed by the Town Council at their meeting in February, 1972. The effect of these decisions is that, commencing with the Bradford and Derby Wards area, grants will be payable on the full range of approved solid smokeless fuel appliances, and not merely those relying on hard coke or closed appliance fuels.

During the year, survey work was commenced on a number of areas, largely cleared under slum clearance powers, with a view to smoke control orders being made. The preparatory work on one of these areas, the East and West Wards Smoke Control Area, was completed by the end of the year, and the order was made by the Health Committee at their meeting in January, 1972.

During the year, 17 householders were warned verbally for contraventions of smoke control orders, and these householders were later warned in writing by the Borough Solicitor.

SMOKE CONTROL PROGRAMME, 1.1.71 TO 31.12.71

Applications:

No. of houses in respect of which applications for approval of proposed works were submitted	35
Estimated expenditure allowable for grant	£1,300·64p
Estimated amount of grant payable by Corporation (seven tenths)	£910·45p

Claims:

No. of houses in respect of which claims for payment of grants were received	111
Total amount paid by way of grant	£4,527·60p
No. of 100% grants paid	9
Amount paid in 100% grants	£401·43p
Additional cost of 100% grants	£120·43p

INSPECTION AND SUPERVISION OF FOOD

Milk:

MILK AND DAIRIES (GENERAL) REGULATIONS, 1959:

No. of Dairies	14
No. of milk Distributors (including retail shops and dairy roundsmen)	515
No. of Dairy vehicles	148

MILK (SPECIAL DESIGNATION) REGULATIONS, 1963, AND MILK .. (SPECIAL DESIGNATION) (AMENDMENT) REGULATIONS, 1965:

During the year 1971, the following licences were granted:

Dealers' (Pre-packed Milk) Licences valid to 31.12.75 91

DAIRIES AND DAIRY VEHICLES:	Dairies	Dairy Vehicles
No. of inspections	78	107
No. of notices served	13	19

Most of the dairy vehicles were of a good standard, but opportunity was taken wherever possible to remind roundsmen of their obligation to display their names and addresses on their vehicles.

SAMPLING OF MILK FOR BACTERIOLOGICAL EXAMINATION:

Samples of milk were taken regularly from dairies, processing plants, milk shops, schools and vending machines and during the course of delivery to consumers. Details of examinations carried out are given on page 109.

Eleven samples of untreated milk were reported as unsatisfactory, i.e., failed to comply with the Methylene Blue test for the keeping quality of milk. The Divisional Dairy Husbandry Advisory Officer of the Ministry of Agriculture, Fisheries and Food was notified in each case; advice was also given to the farmers and vendors concerned, about correct storage and handling of untreated milk during the summer months.

Two samples of pasteurised milk also failed to comply with the Methylene Blue test. A warning was given to the dairy and subsequent samples were found satisfactory.

BIOLOGICAL SAMPLING OF MILK:

Nine hundred and forty-five samples of raw milk were examined for *Brucella abortus* organisms. Twenty-two samples were reported positive and the infected animals were sold for slaughter by the farmers concerned.

Four samples giving positive results to the screening test were referred to the County Medical Officer of Health, as the milk was produced at farms situated in the County Area although it had been purchased from a roundsman operating within the Borough.

Two cases of undulant fever were reported (1969 - 3 cases; 1970 - 3 cases.) In one case a female aged 70 years was admitted to hospital after suffering severe symptoms. This patient drank untreated milk regularly but test of this supply has given negative results. The other case occurred in a man aged 70 years and the infection was again diagnosed when the patient was in hospital. Testing of the untreated milk supply concerned identified one infected animal and this was immediately sold for slaughter.

BRUCELLOSIS ERADICATION:

On the first November, the Government commenced Brucellosis eradication in three main areas of Great Britain, which include parts of Scotland, Westmorland and South Wales. In these areas owners are required to slaughter animals which give positive reaction to the official tests and are paid a replacement grant in addition to the carcase value for each animal dealt with in this way.

It is not known when the Bolton area will become subject to the compulsory scheme. The selection of successive areas in the eradication programme will depend mainly on the response of the farming industry to voluntary accreditation.

The Brucellosis Incentives Scheme which commenced in 1970 to encourage eradication on a voluntary basis is to continue for the remainder of Britain. This scheme does not pay compensation on animals which react to the tests, but a premium of 0.8 per gallon of milk from healthy animals is paid and insurance against infection is available to owners of accredited herds.

So far, four Bolton herds have been accredited under the voluntary scheme and a number of other herds are undergoing the series of tests leading up to the official qualifying test.

SAMPLING OF MILK FOR CHEMICAL ANALYSIS:

Four hundred and twenty-nine samples were obtained, twenty-four of which were reported as unsatisfactory. Eleven samples of milk contained extraneous water; ten samples were deficient in fat, and two samples of untreated milk contained antibiotics. Follow up samples were taken and where necessary appropriate action was taken or warnings given.

Meat Inspection:

The following table shows the number of animals slaughtered:

	Cattle ex- cluding Cows and Bulls	Cows and Bulls	Calves	Sheep and Lambs	Pigs
Number of animals killed and inspected ..	6,113	20,738	60	41,753	32,686
ALL DISEASES EXCEPT TUBERCULOSIS AND CYSTICERCOSIS: Whole carcasses rejected.. .. .	2	83	2	57	172
Carcases of which some part or organ was rejected	124	17,124	—	13,968	10,189
TUBERCULOSIS ONLY: Whole carcasses rejected.. .. .	Nil	Nil	Nil	Nil	Nil
Carcases of which some part or organ was rejected	Nil	Nil	Nil	Nil	Nil
CYSTICERCOSIS: Carcases of which some part or organ was rejected	2	17	—	—	—
Carcases submitted to treatment by refrigeration	2	17	—	—	—
TOTALLY CONDEMNED	Nil	Nil	Nil	Nil	Nil

The total weight of meat condemned at the two slaughterhouses in Bolton was as follows:-

	Tons	Cwts.	Qrs.	Lbs.
Carcases (meat)	36	12	2	2
Offal	169	16	2	3
	206	9	—	5

Meat Inspection Regulations, 1963 (as amended):

All carcasses of animals slaughtered within the Borough were inspected in accordance with the Regulations and stamped with the inspector's mark. The restricted hours of slaughtering imposed under the 1966 Amendment Regulations are still proving satisfactory in operation. Exceptions are made in the event of machinery failure or excessive seasonal throughput.

Analysis of parts of Carcasses of Animals Condemned:

The following table gives the various diseases and conditions found as percentages of the total number of animals affected; it was found that some of the animals were affected by two or more diseases or conditions.

NATURE OF DISEASES OR CONDITION	Percentage
Telangiectasis	69.5
Tuberculosis	Nil
Cysticercus bovis	0.1
Distomatosis	56.8
Septicaemia and Pyaemia	6.4
Mastitis	28.5
Actinomycosis	0.001
Pneumonia, Pluerisy, Peritonitis	24.5
Others	21.6

There was an apparent marked decrease in the incidence of *Cysticercus bovis*; this is due to the non-inclusion in the 1971 figures of calcified and non-viable lesions.

1967	1968	1969	1970	1971
57	61	44	55	19

Inspection of Meat and Other Foods:

During the year regular weekly visits were paid to wholesale grocers and provision warehouses for the purpose of inspecting and disposing of unsound foods. Visits were made on request to retail shops and stalls for the purpose of advising on suspect food stuffs. The table below gives the weights of foods surrendered by provision, fruit and vegetable merchants and retail traders:-

Foodstuffs Condemned					
		Tons	Cwts.	Qrs.	Lbs.
Meat (Fresh)		7	3	—	14
Meat (Tinned)		1	6	—	21
Tongue (Tinned)			1	3	18
Ham (Tinned)			19	1	27
Poultry			17	2	4
Fish (Fresh)			8	—	6
Fish (Tinned)			5	3	17
Vegetables (Fresh)		3	18	1	21
Vegetables (Tinned)		3	6	1	25
Fruit (Fresh)			18	—	17
Fruit (Tinned)		4	14	3	16
Milk (Tinned)			10	—	21
Provisions		5	18	2	2
		30	8	3	13

Meat (Sterilization) Regulations, 1969:

All meat which is unfit for human consumption is placed in a locked room at the abattoir and is collected daily in accordance with the Regulations to be converted into fertilizer and animal feeding stuffs. Facilities have been arranged for the collection of certain offals and glands for pharmaceutical purposes.

Disposal of Condemned Foodstuffs Other than Fresh Meat:

All such foodstuffs are collected and taken to the new refuse incinerator plant at Raikes Lane.

Slaughterhouses:

There are two slaughterhouses in the Borough, both privately-owned. One is a small slaughterhouse in which only pigs are slaughtered; the other is the large modern abattoir at Lever Street where cattle, calves, sheep and pigs are slaughtered.

The new meat processing plant within the curtilage of the abattoir has now been completed along with a small extension to the abattoir; a "new licence" was granted to cover the erection of the meat processing plant.

Mohammedan ritual slaughter is carried out at the abattoir, all animals being rendered unconscious before being slaughtered.

Export Slaughter:

A number of improvements have been effected, e.g., hand-operated wash-hand basins have been converted to foot pedal operation with mixing valves and extra wash-hand basins have been installed to ensure that each group of workers has its own facilities. Additional implement sterilisers have been installed. Fan-assisted ventilators have been fixed in the roof of the lairage. The casualty slaughter bay has been segregated from the normal slaughtering bay, and a lockable gate has been provided to the detention room. These improvements have been made to conform to the E.E.C. Council Directive, as amended in 1969. Only 20 tons of meat were slaughtered for export, owing to the fact that no cattle could be slaughtered for export until the above alterations had been completed.

Slaughter of Animals Acts, 1933 - 1958:

During the year 31 licences were issued to slaughtermen. No contraventions of the Acts or Regulations were reported.

Diseases of Animals Acts:

ANTHRAX ORDER, 1938:

Six cases of suspected Anthrax were notified (1 cow, 5 pigs). After veterinary investigation the disease was not confirmed in any case.

FOWL PEST ORDER, 1936:

Four outbreaks of Fowl Pest were reported in the Borough. It is interesting to note that one of the outbreaks was discovered by one of the pupil public health inspectors when carrying out a routine observation on a small poultry smallholding. All restrictions were removed by October, 1971.

SWINE FEVER:

No outbreaks were reported during the year.

FOOT AND MOUTH DISEASE:

No outbreaks were reported and no movement restrictions were in force in the Borough.

Imported Food Regulations, 1968:

One hundred and thirty six containers of food came into the Borough during the year, some for storage and others directly to the wholesaler. Notification by telephone in advance was given by the landing Port Authority and later confirmed in writing.

Details of the container contents are as follows:

Beef	8,100 Quarters
Beef	1,213 Boxes
Lambs	2,689
Offal	70 Boxes
Onions	3,300 Bags
Potatoes	1,500 Bags
Bacon	90 Bales
Honey	18,773 Cartons
Coffee Mate	42,500 Cartons

Poultry Inspection:

There are no poultry slaughterhouses in the Borough, the last having been closed in early 1969, but there are two premises used for the purpose of eviscerating poultry prior to pre-packing, etc.; similar operations are carried out to a lesser degree in some retail shops.

An average of three visits per week is paid to each of the two larger plants, a total of approximately 300 visits per year thus being paid.

The total number of birds dealt with is approximately 150,000 per annum. The birds are mainly older chickens, with a smaller number of turkeys (4 - 5,000).

Since the poultry have been slaughtered and graded outside the Borough, the main unsatisfactory conditions encountered are due to insufficient refrigeration or packing, leading to decomposition. The percentage of poultry condemned was 0.01% in 1971, and the weight of poultry condemned during 1971 was 17 cwt., 2qr., 4 lbs.

A "spotter" system is employed at both the above poultry premises, the spotter being responsible for putting any suspect birds on one side for inspection on the next routine visit. Arrangements have been made for special visits to be requested in cases of greater urgency and in such cases immediate visits are paid to the premises concerned. Improvements were carried out during 1971 by way of provision of stainless steel tables and working surfaces and the provision of water sprays and at one premises, the use of a circular saw to eliminate the use of wooden blocks and chopping instruments for the removal of legs.

Food and Drugs Sampling for Chemical Examination:

The following samples of food and drugs were obtained by the public health inspectors for chemical analysis.

FOOD SAMPLES:					Genuine	Unsatisfactory	Total
Formal	31	19	50
Informal	349	37	386
DRUG SAMPLES:							
Formal	11	2	13
Informal	72	2	74
MILK SAMPLES:							
Formal	14	5	19
Informal	380	30	410
					<u>857</u>	<u>95</u>	<u>952</u>

Food Hygiene:

The number of premises subject to the Food Hygiene (General) Regulations, 1970 are included in Table 2 on page 124. Details of the visits made, etc., in connection with the enforcement of the Food Hygiene (General) Regulations, 1970, are given in Table 3 on page 125. As a result of this work the following improvements were effected in the town's food premises.

STRUCTURAL IMPROVEMENTS:

Floors	496
Walls and ceilings	664
Doors, windows	202
Decorations	304
Lighting	74
Ventilation	104
Drainage	39

FITTINGS, EQUIPMENT, ETC.:

Sinks, etc.	73
Wash-hand basins, etc.	76
Water supplies - cold	12
Water supplies - hot	34
Shop fittings, equipment, etc.	758
Miscellaneous improvements	737

As in previous years special inspections were made of all kitchens (school meals services, colleges, hostels, etc.) operated by the Education Department and also all N.H.S. hospital kitchens and detailed reports and recommendations were subsequently sent to the Chief Education Officer and Bolton and District Hospital Management Committee respectively. Where necessary, night visits or weekend visits have been paid to premises, mainly in connection with licensed premises. Details of legal proceedings are given on page 112.

Bacteriological Examination of Ice Cream:

Fifty-nine samples of ice cream were obtained from ice cream vendors and manufacturers. Nineteen samples were reported as unsatisfactory. In each case of unsatisfactory samples, follow-up samples were taken and when these samples were again found to be unsatisfactory, a warning with advice about correct equipment sterilisation was given. Regular inspections were made at all ice cream factories.

Bacteriological Examination of Other Foodstuffs:

Eleven samples of foods were submitted to the Department of Pathology, Bolton Royal Infirmary for bacteriological examination for the presence of food poisoning organisms, but negative reports were received in all cases.

Food Complaints:

One hundred and eighty six complaints were made to the department (1970 - 135 complaints). These included a flour cake alleged to taste of disinfectant; a packet of potato crisps containing part of a plastic conveyor belt; and imported papadums containing insect fragments.

Each complaint was thoroughly investigated and appropriate action taken, sometimes involving the withdrawal from sale of batches of food.

Bread again constituted the largest item, giving rise to 24 complaints. The foreign matter found included a staple in a bread roll and part of a dead mouse in a sliced loaf of bread.

Insects in foods resulted in 16 complaints. A tropical dragon-fly was found in a can of pineapple chunks; a beetle in a can of peas; a spider beetle on a chocolate éclair; a wasp in a jar of jam; and a cockroach in a loaf of bread.

Among the metal objects found in food were a wire pan scrubber in a bottle of milk and a shear pin from a packing machine in a can of beans.

Complaints of taste or smell related to rancid butter; fish with an unusual smell; and sour cream trifle.

LIMEADE CONTAINING A HAIRGRIP:

This complaint referred not only to the presence of a hairgrip in a bottle of limeade but to the bitter taste and the paler than normal yellow colour. Tests showed that the acid nature of the soft drink had reacted with the metal grip to release hydrogen and this had neutralised the colouring matter. Soon after being brought to the department the soft drink had become colourless.

COW HEEL CAUSED BLEACHING OF MEAT:

The complainant had made separate purchases of a cow heel and shin beef and when they were cooked together the pieces of shin beef became whitish in colour. The ensuing investigation showed that the washing process after the processing of the cow heels with hydrogen peroxide was insufficient.

MOULD IN FOOD:

(a) Canned Food

A number of complaints of mould involved canned foods. In each case the mould growth was caused by a small cut in the can body occurring when the cardboard boxes containing the cans were opened using a sharp knife. The practice is becoming more common in supermarkets where cans are displayed for sale in the manufacturer's box after its upper half has been removed. As some of these complaints referred to baby foods, manufacturers clearly need to design a box which will both allow for the current trend in displaying foods and obviate the use of a knife.

(b) **Date Coding**

Many of the complaints of mould in food referred to pre-packed perishable foods. In all but one case the food wrapper had been marked by the manufacturer with a code representing either the date of production or the date by which the food should be sold. However, in no case did the retailer understand the meaning of the code.

The question of “open” date-coding is a controversial matter, about which genuine differences of opinion may exist, but it would not be unreasonable to expect manufacturers, whether under legal compulsion or by voluntary action, to use a uniform system of coding by which any retailer could tell the recommended shelf-life of any product, whether or not the housewife were also able to tell its shelf-life. The present system, under which retailers are in effect expected to be familiar with (even if they are supplied with them) literally hundreds or even thousands of secret code markings is quite unrealistic. Even if the current demand for full “open” date coding cannot be granted, a case can be made out for a uniform system (or systems) of coding, even if of a secret nature, which would enable retailers at least to determine the shelf-life of any products they sell.

Type of Food	Nature of Complaint				Total
	Mouldy	Foreign Matter	Unsatisfactory Appearance Taste or Smell	Suspected of Causing Food Poisoning	
Bread	6	16	2	—	24
Cooked meats, Pies and other prepared meat products	2	12	10	—	24
Canned meat	1	1	2	—	4
Canned Fruit/Veg.	4	7	5	1	17
Confectionery	3	12	4	3	22
Milk and milk products . .	4	14	11	—	29
Fish	—	1	6	—	7
Other foods	3	32	23	1	59
	23	95	63	5	186

Infestation in Food:

Fifty-seven samples of cereals, dried fruits and other similar foods were submitted for examination for mites, insects and rodent excreta. One sample of tapioca contained two live booklice and consequently the packer withdrew all stock of this product. All other samples were free from infestation.

Legal Proceedings - Food Standards:

The manufacturer of a product called "Braised Steak in Gravy with carrots" was fined a total of £50 plus £10 costs when two samples were found to have a meat content less than that required by the Canned Meat Product Regulations 1967.

Legal Proceedings were taken in connection with a sample of frozen chicken in Supreme Sauce (Boil in the Bag) which had a meat content of only 50%, whereas the Sausage and Other Meat Product Regulations 1967 require foods described as "meat in sauce" to contain not less than 60% of meat. The manufacturers pleaded guilty to the offence and were fined £20 with £7 costs. Counsel for the company said that the product was intended only for caterers and for such usage the product was exempt from the regulations.

Legal Proceedings - Food Complaints

Legal proceedings were taken under section 2, Food and Drugs Act, 1955 in connection with the following complaints:-

- (a) A bottle of milk containing mould - bottler fined £20.
- (b) A loaf of bread containing a cockroach - baker fined £20 plus £5 costs.
- (c) A beef and picalilli sandwich containing a piece of glass - vendor fined £20, plus £5 costs.
- (d) A loaf of bread containing a moth - baker fined £20, plus £5 costs.
- (e) A loaf of bread containing a part of a mouse - baker fined £50, plus £10 costs.
- (f) A cream dessert which was mouldy - case due to be heard in September, 1972, after five adjournments. The Council are summoning the vendor who in turn is using section 113 to bring the manufacturer before the court.

Legal Proceedings - Food Hygiene:

An immigrant food trader was fined a total of £154 with £7 costs for food hygiene offences in connection with his business of delivering poultry. The summonses related to dirty equipment; no name and address on vehicle; risk of contamination from live poultry carried at the same time as dressed poultry; wrapping of open food in printed paper. Earlier in the year the same person was fined £77 for very similar offences which had occurred during 1970.

The owner of a town centre restaurant was fined a total of £390, plus £10 costs after guilty pleas were entered to summonses relating to seven food hygiene offences. The unsatisfactory matters included, insufficient lighting in a food room; the refuse storage area not suitably sited; the structure and equipment of food rooms not kept clean or in good repair; unsuitable accommodation for outdoor clothing.

Three assistants employed on separate stalls on the Ashburner Street Market were each fined £10, and a barmaid was fined £5, for smoking on food premises.

Potato Crisps - Protein Claim

Twelve formal samples of different flavours of a brand of potato crisps were submitted for analysis in order that a comparison might be made between packets bearing the label "NOW - with added protein" and those without such a label.

The results of analysis showed the protein content of the samples to vary from 6.0 to 7.8 per cent and in some of the packets of crisps labelled with the protein claim there was less protein than in some of the packets without the claim.

However, it was considered that the variations were due mainly to variations in the protein content of the potatoes used. The difference between the average figures for protein for crisps with and without the protein claim was quite small (0.3 per cent), and nutritionally negligible.

The Borough Analyst gave the opinion that potato crisps are not a good source of protein either with or without the addition of protein in the flavouring and there is no justification for any form of labelling which suggests that they are.

A report of the facts was sent to the Borough Solicitor and consideration was given to a prosecution under section 6 of the Food and Drugs Act, 1955, which provides that it is an offence to display food with a label which is misleading.

A lengthy correspondence with the manufacturers failed to persuade them to withdraw the protein claims. However, the wording on the packets was changed to "Now with 6% protein". This was still considered to be misleading as the results of analysis suggested that the crisps had always contained about 6 per cent protein.

The Labelling of Food Regulations, 1970 will make it an offence to label food with a claim that such a food is a source of protein unless at least 12% of the calorie content of such food is provided by protein. The Borough Analyst stated that protein provided only 4% of the calorie content of the crisps sampled.

Although the 1970 Regulations are not yet in force, they may be taken to be an indication of reasonable standards and could most probably be used as an indication of whether a claim is misleading. There is, however, a proviso to the regulation dealing with protein claims stating that there shall be no offence if no claim is made on the label other than a statement that the food contains protein and the minimum protein content.

It was concluded that even if it was possible to overcome the problems raised by the proviso in the 1970 Regulations, the defence would be of considerable mitigating effect and consequently no proceedings were taken.

It seems in this case, that the attempt of the 1970 Regulations to add precision to section 6 of the Food and Drugs Act, 155 succeeds only in reducing food labelling standards.

The matter has been reported to the Association of Municipal Corporations so that they might make representations to the Government Advisory Committee concerned.

Proposals to amend the 1970 Regulations were issued in May, 1972, which would prevent such claims being made for the protein content of foods.

Miscellaneous Samples:

Twenty-one samples of polluted water from various sources (domestic, industrial and farms) were examined bacteriologically and chemically to assist in tracing sources of pollution.

GENERAL SANITATION

Conversion of Waste Water Closets:

During the year a sum of £1,250 was allocated in the estimates for the conversion to waste water closets to fresh water closets. The amount of the grant at present is a maximum sum of £15, the grant having been raised to this figure during 1963; 45 grants were paid. The average cost of a conversion at the present time is approximately £57.

Public Water Supplies:

All employees of the Waterworks Undertaking who are directly concerned with the water supply are required to submit one specimen of faeces for bacteriological examination; new employees are required to submit faeces specimens on three successive days and a specimen of blood is also taken for a Widal test.

Mr. J. M. Adams Waterworks Engineer and Manager, has supplied the following information regarding the water supply to the Borough, although the Undertaking's area of direct supply includes adjoining authorities:-

1. The water supplied to the County Borough of Bolton by this Undertaking was satisfactory both as regards quality and quantity.
2. Normally samples of both raw and filtered water are regularly subjected to full bacteriological examination and chemical analysis. Special examinations and analyses are made as circumstances require.

During 1971, 679 samples of raw water were subjected to bacteriological examination and part chemical analysis and 29 to full chemical analysis in the statutory area of supply. In addition, 2,439 samples of filtered and treated water received bacteriological examination and partial chemical analysis and 38 full chemical analysis. Results showed that the filtered and treated water was of satisfactory quality, B.Coli being absent in 97.3% of the potable water samples tested. All water is treated before passing into supply.

3. No special action was required to be taken in respect of any form of contamination. From tests made the water was shown to have no significant plumbo-solvent action. The average natural fluoride content of the water supplied to Bolton is approximately 0.20 p.p.m.
4. The public water mains afforded a direct supply to a population of approximately 154,360 people living in 56,446 dwelling houses, maisonettes or flats within the Borough. No supply was afforded to dwelling houses by standpipe.
5. The following extensions and renewals of water mains were carried out during 1971.

Size	Existing Property	New Property	Other Development	Renewals
2"	—	443 metres	—	—
3"	—	193 „	—	29 metres
4"	43 metres	530 „	—	131 „
6"	—	241 „	—	20 „
14"	—	—	—	23 „
15"	—	183 „	—	—
18"	—	—	—	69 „

Further details regarding the water supply to the Borough are given in the Annual Report of the Borough Analyst.

Private Water Supplies:

Regular (usually weekly) testing of spring water supplies on the Smithills Estate was carried out during the year, in conjunction with the Estates Department, to check the bacteriological and chemical quality of the water. There was a marked improvement in the quality of the water as a result of the improvements carried out to collecting tanks and supply pipes, and lead contamination has now been eliminated at Holden's Farm, Hampson's Farm, Haslam's Farm, Higher Tongs Farm and Harricroft Farm.

Throughout the year the Estates Department have been carrying out improvement work where the results indicated contamination due to the structure of the tanks and/or the supply pipes; the following work was completed during the year:-

Dean Gate Cottage	New alkathene supply pipe from tank to cottage.
Lomax Wives Farm	New alkathene supply pipe from tank to cottage.
Gilligan's Farm	New altathene supply pipe from spring to tank.
Roscoe Tenement Farm	Old supply disconnected, new supply taken from Gilligan's Farm tank.
Holden's, Haslam's, and Higher Tongs Farms	Lead pipe in dairies replaced by copper pipes.

Regular sampling will continue until the improvement programme is completed.

Sewerage and Sewage Disposal:

The following information has been supplied by the Borough Engineer and Surveyor:

"During the past year the opportunity has been taken to construct separate systems of foul and surface water sewers in the areas adjoining Moss Street, Parrot Street, Vernon Street and Avenue Street, whilst the general re-development of these areas was in progress. This is in accordance with the policy of providing such separate systems and the abolition of storm sewage overflows wherever possible.

A storm sewage overflow which is situated in Oakenbottom Road has been particularly troublesome, and as this overflow could not be abolished, it has now been completely reconstructed.

Extensive Sewer construction works for the prevention of flooding have been carried out at Manchester Road, Blackshaw Lane, and Moss Farm Estate.

The drainage systems in the southern section of the Town are being investigated in detail with a view to modernisation proposals being submitted for the Committee's consideration."

The following information has been supplied by Mr. I. Withnell, General Manager of the Bolton and District Joint Sewerage Board:-

"Sewerage emanating from the Bolton area is conveyed by local sewers and thence by the trunk sewer of the Bolton and District Joint Sewerage Board to the latter's Treatment Works at Ringley Fold in Kearsley. That works also receives drainage from the other Constituent Authorities of the Board, namely Farnworth, Radcliffe, Kearsley, Little Lever and Turton, and parts of Whitefield and Worsley. The total volume receiving full treatment during 1971 amounted to 34.2 million cubic metres (7,529.9 million gallons) that is an average of 93,500 cubic metres (20.6 million gallons) per day.

The principal treatment processes utilised at the Ringley Fold Works are sedimentation and a mechanical surface aeration application of the activated sludge process which yields an effluent, well within standards prescribed by the Mersey and Weaver River Authority, for discharge to the River Irwell. Sludge produced by that treatment has been subjected to anaerobic digestion which, as well as reducing quantities for final disposal and virtually eliminating offensive odours, produced sludge gas totalling 2.9 million cubic metres (102.3 million cubic feet), averaging 7,900 cubic metres (280,200 cubic feet) per day. That gas, containing approximately 70% methane, has been wholly utilised to produce electrical power for works operation.

The sewage received contains, in addition to waste waters from domestic premises, effluents from industrial processes, and during the year nine new discharges from trade premises in Bolton have been approved, but five have been discontinued.

A small area of the County Borough, in the South West, lying outside the Board's designated area, drains to the Corporation's Salford Road treatment plant, which, by agreement, is operated by the Board. This "Ring-Ditch" type of plant, particularly suited for unattended operation produces a fully stabilised effluent well within River Authority requirements".

Factories Act, 1961:

There are 862 factories within the Borough which were the subject of 569 inspections, resulting in 21 cases in the service of written notices on the occupiers. Full details of the work carried out under the Factories Act, 1961, are contained in Tables 7 to 10 on pages 128 to 130.

Offices, Shops and Railway Premises Act, 1963:

Up to the end of 1971, 2,245 premises had been registered with the local authority in accordance with the Act; in 56 cases, applications forwarded to the local authority in error had been re-directed to H.M. Factory Inspectorate.

Details of registrations, inspections, action taken, etc., are given in Table 11.

Routine "general inspections" of all registered premises in the Borough are now proceeding steadily and systematically and it is hoped that premises will be inspected at least once every two years.

No accidents presenting unusual features occurred during the year, and no legal proceedings were taken for offences against the Act.

Two inspectors attended a two-day course on Safety in Offices and Shops, and two other inspectors attended a one-day course on Hoists and Lifts.

It is pleasing to record continued good co-operation with the local factory inspectorate in administration of the Offices and Shops Act.

Houses in Multiple Occupation:

During the year 131 visits and inspections were made of houses in multiple occupation, and 11 notices (section 15, Housing Act, 1961) were served, in addition to notices for repairs under the Public Health Act, 1936.

Pressure of work has again prevented any sustained attempt being made on the problem of multiple occupation, but it is hoped to give consideration to the setting up of a scheme of registration and control of such premises, which might considerably ease the public health inspectors' burden in what is admittedly time-consuming work.

Caravan Sites and Control of Development Act, 1960:

At the end of 1971 there were 5 licensed sites, the maximum number of caravans licensed at one site being four. The total number of caravans on the occupied sites was 11.

Caravan Sites Act, 1968:

Considerable difficulty continued to be experienced during 1971 due to the occupation of vacant sites in various parts of the Borough by caravan dwellers, often appreciable numbers of caravans being present on individual sites. Sites which became occupied in this way were notified to the Chief Valuer, who, in conjunction with the police, arranged for the sites to be cleared.

In 1970, the Town Council decided to set up a caravan site of 15 pitches at Hall Lane. Formal objections to this proposal were entered by the Borough of Farnworth and Little Lever U.D.C.; in addition, objections were entered by private individuals and by means of petitions. Towards the end of the year, considerable opposition was voiced to the Council's policy of clearing occupied sites, while not themselves having provided a site, and following discussion with the representatives of the Gipsy Council, the Town Council eventually decided to set up a temporary caravan site of 15 pitches on a cleared

site at Simpson Street; the necessary preparatory work on this temporary site was commenced towards the end of the year. Early in 1972, however, it was learned that the Secretary of State for the Environment had decided that the question of whether or not a Corporation site should be set up at Hall Lane would be left to the discretion of the Bolton Town Council, and in view of this decision, work on the Simpson Street site was discontinued, with a view to the implementation of the Hall Lane proposals as a matter of urgency.

Common Lodging Houses:

There are now no common lodging houses within the Borough, the last remaining one, that operated by the Salvation Army at St. George's Road, having closed down in July, 1968.

Offensive Trades:

There were three offensive trades within the Borough, i.e.:-
One fellmonger
One gut-scraper
One fell-monger and gut-scraper.

There are no local bye-laws affecting these trades, but the comparatively small number of premises involved, and the satisfactory standards of operation, do not justify the making of such bye-laws.

Hairdressing Establishments:

There are 314 hairdressing premises registered in accordance with the Bolton Corporation Act, 1949, section 48. One-hundred and twenty-nine inspections were made.

Pharmacy and Poisons Act, 1933; Poisons List Order, 1970, Poisons Rules, 1970:

The names of 65 persons are included in the local authority's list of persons entitled to sell poisons under Part II of the Poisons List. The attention of shopkeepers was drawn, verbally or in writing, to any infringement of the Act or Rules.

Pet Animals Act, 1951:

Animal Boarding Establishments Act, 1963:

Riding Establishments Acts, 1964 and 1970:

The following premises were licensed in respect of the year 1971:

	Premises	Inspections
Pet Animals Act, 1951	11	35
Animal Boarding Establishments Act, 1963	4	51
Riding Establishments Acts 1964 and 1970	2	21

On the 1st January, 1971, the Riding Establishments Act, 1970 came into operation; steps were taken to revise the licence conditions in accordance with the provisions of the 1970 Act.

Following a prosecution in 1970 against the proprietor of an animal boarding establishment for permitting very serious overcrowding of his premises during the Bolton Holidays, all proprietors of such establishments are now warned, in advance of each major holiday, against permitting overcrowding to occur; no further trouble has been experienced in this direction.

Rag Flock and Other Filling Materials Act, 1951:

This legislation prescribes standards of cleanliness for filling materials used in upholstered articles, stuffed toys, etc., and the local authority are required to register or licence premises where the relevant operations are carried out. There are at the present time 20 premises in the Borough registered under the Act; there are no licensed premises within the Borough.

Noise Abatement Act, 1960:

During the year, 46 complaints were received and were classified as follows :

COMPLAINTS OF NOISE FROM NON-DOMESTIC PREMISES:									
Machinery	5
Road Works	3
Vehicles	3
Guard Dogs	3
Music	2
Fans	2
Scrap Metal	1
Miscellaneous	7
									— 26
COMPLAINTS OF NOISE FROM DOMESTIC PREMISES:									
Animals	9
Music	5
Property Repairs (D.I.Y.)	2
Miscellaneous	4
									— 20
									—
									46
									—

Complaints of noise (3) from vehicles were referred to the Police. In 9 cases complaints of nuisance were not substantiated; in 22 cases the nuisance was abated informally, while 12 cases are still under investigation; no formal action was required in any case.

Fertilisers and Feeding Stuffs Act, 1926:

Twenty-eight samples of fertilisers and animal feeding stuffs were taken under the Act. Fourteen samples were reported as unsatisfactory.

Six of these contained ingredients which were in excess of the declared amount, although the excess was not to the prejudice of the purchaser.

In the case of unsatisfactory samples either a follow-up sample was taken or the matter was brought to the attention of the manufacturers.

Psittacosis:

All the parrots in the aviary at the Arndale Shopping Centre had to be destroyed soon after becoming a prominent feature of the new development.

Two birds which had died the day after the official opening of the Centre were found to be suffering from psittacosis, a disease communicable to man.

The Department undertook the task of destroying the remaining birds and the disinfection of the cage.

Full co-operation was extended by the developers and after a suitable period, the cage was restocked with budgerigars.

DISINFECTION AND DISINFESTATION

Disinfection:

Routine terminal disinfection of premises after cases of illness is carried out in special cases only. No charge is made where such work is carried out in the interests of Public Health. Details are given in Table 12 on page 132.

A special stock of equipment, together with a supply of formaldehyde, white cyllin and other disinfectants is retained at School Hill for immediate use in the event of smallpox occurring. Facilities exist for the disinfection of vehicles and special containers are available for enclosing infected mattresses and bed linen.

Disinfestation:

Occupiers of food or other business premises subject to special infestation risks continue to enter into annual agreements with the Corporation for regular treatments of their premises for the prevention of rodent or insect infestation. There are now 235 agreements in force; the annual income from pest destruction is now over £8,000. Table 13 on page 132 summarises the work carried out.

Regular treatments to control the rat population in the sewers is carried out by the Borough Engineers Department in collaboration with the Health Department. Warfarin is the poison in general use but Zinc Phosphide and Arsenious Oxide are used on occasions, Paranitrophenol being incorporated to inhibit mould growth. In selected areas, fluoracetamide is used under strict supervision.

Block surveys of premises continue in selected areas and this has proved effective in removing infestations particularly in blocks of properties in the town centre.

The number of wasps nests and swarms was unusually high and included some particularly large nests, which the operators were able to recover fairly intact. These were presented to various schools for educational purposes.

The schools and school meals kitchens in the Borough are surveyed regularly to detect any rodent or insect infestation. Any necessary treatment is carried out immediately.

Control of the rodent population on the Corporation controlled tipping sites is maintained by regular surveys and treatments. River banks are also subject to regular surveys and appropriate treatment.

Several complaints of infestation by the domestic mite (*Glycyphagus domesticus*) were dealt with during the year, some of which proved particularly stubborn. These were resolved with the co-operation of the complainants in removing the causes of dampness which provides ideal breeding conditions for these tiny insects.

Experiments were in hand at the year end to deal with flocks of roosting starlings on the Town Hall buildings and on the surrounding decorative trees. The problem is expected to be solved early in 1972.

Mortuary:

The mortuary forms part of the premises at School Hill used as a Disinfection and Disinfestation Depot. An attendant is employed in combined mortuary and disinfestation duties.

One body was received at the mortuary during the year. No post mortem examination was carried out. Refrigeration facilities are provided for the storage of bodies.

Municipal Medical Baths:

The medical baths are situated in an annexe to the School Hill Depot. The cleansing of verminous men is carried out by an attendant at the Depot. The cleansing of verminous women and children is carried out by nursing staff at the Health Department.

A summary of the cases dealt with is given below:-

	Males
Head Infestation	—
Scabies	43
Body Lice	22
	—
	65
	<hr/>

TABLE 1

Complaints:

The following complaints were received and investigated:

Housing defects	447
Choked and defective drains	294
Accumulations of offensive matter	246
Unsatisfactory foodstuffs	186

Verminous Premises:

(a) Bed bugs	119
(b) Rat and mouse infestations	3,605
(c) Cockroaches and other insect pests	1,034
Keeping of animals and poultry	15
Smoke	47
Noise	46
Offensive odours	80
Miscellaneous	195
	<hr/>
	6,314
	<hr/>

TABLE 2

Standing Commitments:

Premises subject to Routine Inspection

TYPE OF ESTABLISHMENT:	NO. OF PREMISES
Common Lodging houses	—
Houses in multiple occupation	245
Moveable dwellings	12
Food Premises:	
Bakehouses	99
Basement bakehouses	1
Fish Friers	103
Registered premises, Sec. 16, Food and Drugs Act, 1955	272
Other catering establishments	171
Miscellaneous food preparing premises	134
Ice-cream premises - manufacture	4
Ice-cream premises - sale only	307
Meat shops	119
Slaughterhouses	2
Dairies	14
Milk distributors	515
Food shops	828
Licensed premises (On)	221
Licensed premises (Off)	108
Food stalls	143
Vehicles - Meat	30
Vehicles - Milk	148
Factories (Mechanical)	771
Factories (Non-mechanical)	91
Workplaces	241
Offices	553
Retail shops	1,050
Wholesale shops, Warehouses	120
Catering establishments open to the public, canteens	246
Fuel storage depots	8
Outworkers' premises	13
Factory chimneys	101
Hairdressers' premises	314
Places of entertainment	35
Clubs	53
Offensive Trades	4
Registered premises, Rag Flock and Other Filling Materials	
Regulations, 1951 and 1954	23
Pet Shops (Pet Animals Act, 1951)	11
Animal boarding establishments	4
Riding establishments	2

TABLE 3

Detection of Sanitary Defects:

Summary of Visits and Inspections

NATURE OF VISITS	NO. OF VISITS
Dwelling-houses for housing defects under Public Health Act.	
After complaint	753
Subsequent visits	2,229
Dwelling-houses under Housing Acts:	
Detailed inspections	1,380
Re-inspections, re-visits	2,871
Certificate of disrepair	—
Infected dwelling-houses:	
After notified infectious disease (other than tuberculosis)	72
Contacts	36
Schools and church halls	13
Swimming baths	1
Water sampling:	
Swimming baths	—
Dwelling houses	—
Business premises	260
Cinemas, dance halls, billiard halls	34
Offensive trade premises	246
Stables, piggeries, keeping of animals	69
Houses in multiple occupation	131
Factories Act, 1961:	
Factories with mechanical power	556
Factories without mechanical power	12
Outworkers' premises	—
Underground rooms	—
Hairdressing premises	129
Tents, vans, sheds	128
Smoke Abatement:	
Boiler house surveys	5
re Prior Approval applications	—
re Smokeless Zone and Smoke Control Areas	598
Delivery of pamphlets	1,429
Smoke observations	164
Smoke investigations	30
Re-visits	36
Combustion readings	—
Volumetric stations	2,435
Noise abatement	24
Fairgrounds	21

Drainage:

Conversion from waste water to water carriage system ..	90
Miscellaneous tests and inspections	410
Public sewers	5
Water courses and ditches	55
Land and tips	391
Septic tanks and cesspools	11
Sanitary conveniences - including public houses	107
Miscellaneous visits	3,275
Visits not inspections	1,045

Vermineous premises:

Rats and mice: After complaint or from survey	4,579
Subsequent and survey visits	26,440
Bug infestations: No. of premises visited	121
No. of premises where definite infestation existed	119
Cockroaches	651
Other vermin	402

Inspections for supervision of food:

Unfit foodstuffs other than meat	745
Slaughterhouses and cold stores	2,449
Butchers' Shops (Food Hygiene (General) Regulations, 1970)	680
Freight containers	163

Food Hygiene (General) Regulations, 1970:

Bakehouses	215
Fish shops, grocers and greengrocers	1,843
Factory canteens	125
Restaurant kitchens, fish friers, etc.	521
Food vehicles	129

Chemists	25
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Hotel and Beerhouse bars and cellars:

Day inspections	663
Night inspections	11

Food and Drugs Act, 1955 - Section 16:

Ice-Cream premises (Heat Treatment Regs. 1959-1963)..	41
Sausage manufacturers	35
Preserved meat preparation premises	243
Preserved fish preparation premises	8

Milk and Dairies Regulations, 1959 Food and Drugs Act, 1955; Section 91:

Milk sampling for bacteriological examination	31
Contravention of Milk and Dairies Regulations	2
Dairies	78

National Assistant Act, 1948, Section 47	-
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Disease of Animals Acts and Orders.. .. .	79
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Farms (Brucellosis, sampling, etc.)	233
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Offices, Shops and Railway Premises Act, 1963:

General inspections	805
Other visits	1,870

TABLE 4**Notices served:**

Action to secure abatement of nuisances and to enforce the appropriate statutory enactments was taken as follows:

Nature of Notice	Public Health Act 1936	Food Hygiene (General) Regulations 1970	Factories Act 1961	Offices, Shops and Railway Premises Act 1963	Byelaws: Hairdressers and Miscellaneous Premises
No. of informal notices served	160	421	21	201	127
No. of statutory notices served	92	—	—	—	—
No. of premises concerned	79	—	—	—	—
No. of cautionary letters sent by Borough Solicitor ..	16	—	—	—	—

TABLE 5**Housing Defects and Legal Proceedings**

A summary of general housing defects or disrepair of property where it was necessary to take legal proceedings, and the results of such proceedings is given below:

CASE No.	STATUTE	DETAILS OF CONTRAVENTION	RESULT
1	Public Health Act, 1936, Section 93	Failure to comply with abatement notice in respect of general defects.	Nuisance Order made against owner.
2	Public Health Act, 1936, Section 39	Failure to comply with statutory notice requiring repairs to eavesgutter, causing dampness at adjoining house.	Fine of £5 imposed on owner/occupier.
3	Public Health Act, 1936, Section 93	Failure to comply with abatement notice in respect of general defects.	Nuisance Order made against owner.
4	Public Health Act, 1936, Section 95	Failure to comply with Nuisance Order.	Fine of £20 imposed on owner.
5	Public Health Act, 1936, Section 95	Continued failure to comply with Nuisance Order.	Fine totalling £29 imposed (i.e., £1 per day since Order made).
6	Public Health Act, 1936, Section 93	Failure to comply with abatement notice in respect of general defects.	Nuisance Order made against owners, and costs awarded to the Corporation.
7	Public Health Act, 1936, Section 39	Failure to comply with statutory notice requiring drainage improvements.	Fine of £5 imposed on owner/occupier.

Ten cases in which summonses have been served were withdrawn, the necessary work having been carried out.

TABLE 6
Sanitary Improvements Effected:

Action was taken under either the Public Health Act or the Housing Acts.

NATURE OF IMPROVEMENT	No. OF IMPROVEMENTS
Floors repaired	17
Internal walls repaired	138
Ceilings repaired	38
Doors and windows repaired	112
Stairs repaired	3
Roofs repaired	75
Chimneys and flues repaired	22
Eavesgutters repaired	61
Rainwater pipes repaired	14
Soil and waste pipes repaired	24
External walls repaired	27
Yards, paths, etc., repaired	15
Sanitary conveniences repaired	65
"Tippler" closet conversions	45
Refuse accommodation	87
Drains repaired	51
Fireranges repaired	2
Sinks, water supplies, wash boilers, etc., repaired	41
Miscellaneous	121

TABLE 7
Factories Act, 1961
Places of Employment
Defects Found

Particulars	Number of cases in which defects were found				No. of cases in which prosecutions were instituted
	Found	Remedied	Referred		
			to H.M. Inspector	by H.M. Inspector	
Want of Cleanliness (S.1)	42	42	—	—	—
Overcrowding (S.2)	—	—	—	—	—
Unreasonable temperature (S.3) ..	—	—	—	—	—
Inadequate ventilation (S.4)	1	2	—	1	—
Ineffective drainage of floors (S.6) ..	—	—	—	—	—
Sanitary Conveniences (S.7):-					
(a) Insufficient	—	1	—	2	—
(b) Unsuitable or defective	261	263	—	2	—
(c) Not separate for sexes	—	—	—	—	—
Other offences against the Act (not including offences relating to Out-work)	14	14	—	—	—
TOTALS	318	322	—	5	—

TABLE 8

Factories Act, 1961

Outwork (Sections 133 and 134)

Nature of Work	Section 133			Section 134		
	No. of Outworkers in Aug. list required by Sec. 133 (1) (c)	No. of cases of default in sending lists to the Council	No. of prosecutions for failure to supply lists	No. of instances of work in unwholesome premises	Notices served	Prosecutions
Making or repairing umbrellas, etc.	12	—	—	—	—	—
Brush making ..	1	—	—	—	—	—
TOTALS ..	13	—	—	—	—	—

TABLE 9

Factories Act, 1961

Places of Employment - Improvements Secured

Cleanliness improved	42
Temperature improved	—
Sanitary Accommodation :	
Additional accommodation provided.. ..	—
Accommodation improved	263
Accommodation reconstructed	1
Ventilation improvements	2
Drainage improvements	1
Miscellaneous improvements	13

TABLE 10
Factories Act, 1961
Places of Employment
Inspection for Purposes of Provisions as to Health

Premises	Number on Register	Number of		Occupiers Prosecuted
		Inspections	Written Notices	
(i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by Local Authority	91	12	1	—
(ii) Factories not included in (i) in which Section 7 is enforced by the Local Authority	771	556	20	—
(iii) Other premises in which Section 7 is enforced by the Local Authority* (excluding outworkers' premises) ..	36	1	—	—
TOTALS	898	569	21	—

*Electrical Stations, Institutions, Building Operations and Works of Engineering Construction.

TABLE 11
Offices, Shops and Railway Premises Act, 1963

Table A - Registrations and General Inspections

Class of Premises	Number of Premises newly Registered during the Year	Total Number of Registered Premises at End of Year	Number of Registered Premises Receiving a General Inspection During the Year
Offices	37	553	183
Retail Shops	76	1,050	464
Wholesale Shops, Warehouses	8	120	32
Catering Establishments Open to the Public, Canteens	14	246	118
Fuel Storage Depots	—	8	8

Table B
 No. of Visits of all kinds by Inspectors to Registered Premises 1,870

TABLE C - Analysis of Persons Employed in Registered Premises by Workplace

Class of Workplace	Number of Persons Employed
Offices	9,034
Retail Shops	5,230
Wholesale Departments, Warehouses	2,068
Catering Establishments Open to the Public	2,119
Canteens	230
Fuel Storage Depots	14
TOTAL	18,695
TOTAL MALES	6,726
TOTAL FEMALES	11,969

TABLE D - Exemptions “Nil”.

TABLE E - Prosecutions instituted of which the hearing was completed in the year:—“Nil”

No. of complaints (or summary applications) made under Section 22	Nil
No. of interim orders granted	Nil

TABLE F - Inspectors

No. of inspectors appointed under Section 52(1) or (5) of the Act	14
No. of other staff employed for most of their time on work in connection with the Act	1

TABLE 12**Disinfection**

	Free of Charge	On Payment of Charge	Total
Premises visited for Disinfection	1	—	1
Beds	—	—	—
Rooms	4	—	4
Articles	—	—	—
Articles Destroyed	—	—	—

The premises disinfected free of charge were for the following reasons:

Tuberculosis 1

TABLE 13**Disinfestation**

	Number of Premises Disinfested				Total
	Domestic Premises	Business & Industrial	Hospitals	Schools	
Bed Bugs.	117	2	—	—	119
Cockroaches	451	115	51	26	643
Fleas	57	4	1	—	62
Golden Spider Beetles	20	—	—	—	20
Wasps	144	6	—	—	150
Wood Lice	2	—	—	—	2
Body Lice	3	—	—	—	3
Silver Fish	28	2	2	1	33
House Fly	14	7	—	2	23
General Disinfestation	20	1	—	—	21
Others	69	7	—	1	77

TABLE 14

Destruction of Rats and Mice

Prevention of Damage by Pests Act, 1949

	Type of Property	
	Non-Agricultural	Agricultural
PROPERTIES OTHER THAN SEWERS		
1. Number of properties in district	65,460	101
2. (a) Total number of properties (including nearby premises) inspected following notification	3,605	—
(b) Number infested by (i) Rats	1,253	—
(ii) Mice	2,352	—
3. (a) Total number of properties inspected for rats and/or mice for reasons other than notification	10,080	17
(b) Number infested by (i) Rats	154	—
(ii) Mice	754	—

REPORT OF THE BOROUGH ANALYST

The reorganisation of local government has exercised the minds of our administrators at both national and local levels for some years now. The commission sitting under the chairmanship of Lord Redcliffe-Maude (the Maude Report) proposed sweeping changes in local government boundaries and organisation, which many regarded as a blueprint for the future. Under its provisions the identity of many organs of local government, including some of the counties whose history can be traced back to mediaeval times would have disappeared. In the event a change of government took place before any of the Maude proposals could be put into effect and the new government has now produced its own ideas on how local government should be organised, rather different from Maude but involving many fundamental changes nevertheless.

So far as Public Analysts are concerned it should be noted that the White Paper clearly assigns the responsibility for the enforcement of the Food and Drugs Act and therefore the appointment of Public Analysts to the Metropolitan Counties in the new Metropolitan areas. Bolton will no longer have a Borough Analyst after April, 1974, and the reorganisation seems likely to have similar effects in other parts of the country. Public Analysts have played a notable part in the development of consumer protection and public health services and will continue to do so. The new Metropolitan Counties should be able to extend the scope of laboratory services in local government, not only as consumer protection and environmental health agencies, but also in many other areas, where there is a need to extend laboratory testing of materials, the development of objective and scientifically tested specifications and the special investigations of the inevitable problems which arise in the deployment of new materials and technology.

A major item of laboratory equipment was purchased in 1971, namely the infra-red spectrophotometer. This instrument provides a rapid means of identification of unknown materials but has also proved useful in the examination of samples of petroleum products, particularly petrol and paraffin. An approximate octane rating of a sample of petrol can now be given in less than half an hour; further details are given elsewhere in this report.

Staff

Mr. P. Heelis, Trainee Chemist, left us in October, 1971, to take up an opportunity to complete his studies as a full-time student at the University of Salford. Miss J. A. Armstrong was appointed as a Trainee Chemist to fill this vacancy from the same date.

I am pleased to report that Miss S. Lancaster, Trainee Chemist, gained the Ordinary National Certificate.

In presenting this Annual Report to the Health Committee, I would like to express my appreciation of the continued loyal support I have received from the staff of the laboratory. My thanks are due to the Manager and Staff of the Waterworks Department, the Public Health Inspectors, and to the clerical staff of the Health Department for their kind co-operation and assistance. I should also like to thank the Medical Officer of Health for his encouragement, advice and interest in the work of the laboratory.

New and Proposed Legislation

New legislation affecting the sale of foods was comparatively sparse in 1971 compared with 1970 and some earlier years. An amendment to the Preservatives Regulations affecting nitrate and nitrite in cured meats appeared and the Food Standards Committee issued reports on vinegar, antioxidants and the date-marking of foods.

Preservatives in Food (Amendment) Regulations 1971

These amending regulations have the effect of imposing maximum limits for nitrates and nitrites in cured and preserved meats, up to 500 part per million of sodium or potassium nitrate and up to 200 part per million of sodium or potassium nitrite. Formerly the regulations included maximum limits for sodium nitrite in cooked and uncooked pickled meats of 200 and 500 part per million respectively, with no limit for nitrates and no limits for either nitrate or nitrite in bacon and ham. The new limits have been brought into force in view of the recent discoveries that nitrosamines, which are known to be strong carcinogenic agents, might be formed in foods containing nitrates or nitrites.

Food Standards Committee Reports

Third Supplementary Report on Antioxidants in Food (April, 1971)

Over the last few years some doubts have been expressed about the safety of one of the permitted antioxidants, butylated hydroxytoluene (BHT). The Food Additives and Contaminants Committee last considered the matter in 1966 when they recommended a further review of the position within 2 years. This further review began in 1969 and the recommendations were published in April, 1971. The Pharmacology Sub-Committee of the Food Additives and Contaminants Committee now take the view that BHT should continue to be permitted for use as an antioxidant and that no change be made in the maximum permitted limit. They did, however, consider representations that BHT should be allowed in chewing gum up to 1000 part per million, but advised that a decision on this be deferred until a general review of the Antioxidant Regulations is undertaken.

Proposals to Amend the Bread and Flour Regulations 1963

Proposed amendments to these regulations, which would have the effect of allowing two new improving agents in flour, Azodicarbonamide and L-Cysteine Hydrochloride, were issued in October, 1971, by the Ministry of Agriculture, Fisheries and Food. A report of the Pharmacology Sub-Committee of the Food Additives and Contaminants Committee giving approval for the use of these substances was issued at the same time as the proposed amendments to the regulations. One of the new agents L-Cysteine Hydrochloride is a naturally occurring amino-acid, which is present in a combined form in most food proteins.

Total Number of Samples Examined

The total number of samples examined during 1971 was 8,403, rather more than for previous years, the increase being largely due to increased sampling for the Waterworks Department.

The number of samples examined each year for the past seven years are shown below:

1965	7,477
1966	7,284
1967	7,060
1968	6,450
1969	7,162
1970	7,744
1971	8,403

For the Health Committee

Food and Drugs	952
Ice Cream (bacteriological examination)							59
Water from domestic premises (Bolton only)	..								235
Swimming Bath Waters	119
Fertilisers and Feeding Stuffs						28
Complaint samples	112
Miscellaneous samples	324
Air Pollution - Smoke and Sulphur Dioxide measurements	2,805
For the Waterworks Committee	3,542
For other departments, other local authorities and private samples	227
Total									8,403

FOOD AND DRUG SAMPLES

Sampling officers submitted a total of 952 samples of foods and drugs and details of these samples can be seen in Table A. 95 samples, representing 10 per cent of the total, were reported as unsatisfactory, a slightly smaller proportion than in 1970 (12.1 per cent). Details of all unsatisfactory food and drug samples are given in Tables B to F.

UNSATISFACTORY SAMPLES OF FOOD AND DRUGS

Unsatisfactory Milk Samples

Table C lists all unsatisfactory milk samples and Table B gives a summary of the position with respect to unsatisfactory milk and includes a comparison with previous years.

The percentage of milk samples reported as unsatisfactory, 8.0 per cent is slightly lower than for 1970 (10.5 per cent) and includes 13 samples which were classified as unsatisfactory only because they failed the Methylene Blue Test. A larger number than usual were reported as unsatisfactory because of deficiencies in fat content and two of these samples were of Channel Islands milk which failed to meet the minimum requirement of 4.0 per cent fat. The other fat-deficient samples were mainly from a single source and incorrect feeding of the cows was probably the cause of these low fat figures. Of the 11 samples found to contain added water, 5 complied with the presumptive minimum limits for fat and non-fatty solids of 3.0 and 8.5 per cent respectively, but the Freezing-Point Test indicated the presence of added water.

Unsatisfactory Food and Drug Samples (other than milk samples)

Apart from milk samples, 60 samples of other foods and drugs were reported as unsatisfactory. All these unsatisfactory samples are listed in Table C, but some require some further explanation or comment either because of their particular significance or more general implications.

Loss of chloroform by volatilisation from cough mixtures has been a relatively common cause for reporting such samples as unsatisfactory. A deficiency of chloroform in a cough mixture is hardly a matter of extreme importance, but when the manufacturer decides that the way to avoid such criticism of his product by public analysts is to stop declaring the amount of chloroform on the label, and merely to refer to it as a flavouring agent, the situation seems to call for some comment. The Pharmacy and Medicines Act 1941 requires all medicinal preparations other than those listed in the British Pharmacopoeia and the British Pharmaceutical Codex to declare the amounts of all active ingredients on the label. The question revolves round the meaning of "active ingredient" and it was argued by the manufacturers that chloroform was not an active ingredient since the amount present in a single dose of this cough mixture was less than the minimum dose stated in the British Pharmacopoeia. Most of the ingredients of cough mixtures are present in amounts substantially less than the recommended doses of these constituents when used as single medicaments and if this interpretation of the meaning of the term "active ingredients" is accepted, most cough mixtures and a wide range of other proprietary medicines would not need to declare any ingredients at all.

The Annual Report for 1970 refers to protein claims in the labelling and advertising of foods and in particular to Regulation 21 of the Labelling of Food Regulations 1970. Although these regulations do not come into force until January, 1973, they proved to be of special significance in connection with samples of potato crisps which were reported as unsatisfactory because of the claims on the label for protein content. Attention was first drawn to these claims by the Public Health Inspectors' Section, who noticed packets of potato crisps on sale bearing the words "Now with added protein". Samples were taken of the same brand both with and without the protein claim and in all 27 samples of crisps were examined. Of 24 samples of the brand in question 12 samples of different flavour varieties with no protein claims on the labels had protein contents ranging from 6.0 to 7.1 per cent with an average figure of 6.8 per cent whereas 12 samples bearing the words "Now with added protein" showed figures from 6.3 to 7.8 per cent with an average of 7.1 per cent. For nutritional purposes protein is calculated as a percentage contribution to the total calorie value of the food and on this basis the average figures become 4.95 and 5.2 per cent respectively. Davidson and Passmore ("Human Nutrition and Dietetics" 3rd edition 1967) classify foods in which less than 7 per cent of the calorie value is due to protein as poor sources of protein.

Any additional protein in these crisps is therefore of no nutritional significance as a protein source and, since it was stated on the label to be part of the flavouring, this is hardly surprising. Indeed none of the samples contained more protein than would have been expected bearing in mind the average protein content of potatoes and the fact that crisps contain about 35 to 40 per cent of added fat. Objection was therefore taken to the prominent wording on the packets "Now with added protein", with a view to action being taken under Section 6 of the Food and Drugs Act on the grounds that this wording was calculated to mislead the purchaser. However, at this point consideration was

turned to Regulation 21 of the Labelling of Food Regulations 1970, which deals with protein claims in food. Although there is a general requirement that no claim must be made unless protein accounts for at least 12 per cent of the total calorie value of the food, proviso iii (ab) states that this limit will not apply if the only reference to protein is a plain statement "without further elaboration" that the food contains protein and a statement of the amount of protein or the mention of protein at the appropriate point in the list of ingredients. The Corporation's legal experts advised that the wording "now with added protein" was probably within the terms of this proviso and that, although these regulations are not yet in force, they would affect the result of any action taken under Section 6 of the Act. Not everyone may agree with this interpretation of the 1970 Labelling Regulations, but in the event no action was taken and at least one other Food and Drug Authority is known to have refrained from action on samples of the same brand of crisps for precisely the same reasons.

During the rather lengthy correspondence with the manufacturers, the design of the label on the packets was amended to read "Now with 6% protein", which is no more satisfactory than the previous claim, since the undiscerning purchaser may take this to mean 6% **added** protein. One of the reasons put forward by the manufacturers in defence of their protein claims may be of interest to analysts and others concerned with food nutrition and technology, namely that their crisps contained more protein than milk which is regarded as a good source of protein. This is, of course, true only if the simple percentages of protein are compared but loses sight of the fact that to consume 1g. of protein from the crisps one must also consume 8g. fat and 9g. carbohydrate, hardly a balanced diet! The regulations therefore deal with protein claims by considering the proportion of the total calorie value of a food which is contributed by protein. On this basis milk, which contains about 4 per cent protein, has a calorie value of which 21 per cent is due to protein, the large difference between the two figures being mainly accounted for by the water content of milk, about 88 per cent compared with 3 per cent water in crisps.

As a consequence of this episode with potato crisps the apparent weakness in the Labelling of Food Regulations 1970 has been referred to the Association of Municipal Corporations with a view to representations being made to the MAFF to amend the regulations. It is very probable that if these regulations had never been made, action would have been taken on the labelling of these crisps under Section 6 of the Food and Drugs Act.

Proposed amendments to the 1970 Labelling Regulations have recently come to hand from the Ministry of Agriculture, Fisheries and Food (May, 1972). These amendments include a change in Regulation 21 so that the proviso iii (ab) will apply only to the mention of protein in a list of ingredients or as part of a statement of the total nutrient content, and the claims referred to here will not be permitted.

A sample described as "Slimming Tea" was found to be maté tea - a species of *Ilex* commonly used as a beverage in South America. No food has any specific weight-reducing properties and the description "Slimming Tea" is in itself questionable, but the writer of the copy for the label on the packet and leaflet inside had certainly spared no effort to impress his customers. This product was claimed to control the overpowering desire to eat, to be a "safe nerve stimulant and a powerhouse of abundant energy and vitality to get you through your daily chores whilst using up all the remaining calories in your body". The customer, no doubt by this time quite consumed, was instructed to forget about willpower or diet.

“Spam” became a household word during the second World War, but it seems that it is sometimes forgotten by those who should know better that it is the proprietary name and registered trade mark of a particular brand of canned chopped pork and ham. A sample of a meat product sold loose from a market stall with a ticket marked “Spam” was shown to be luncheon meat, which is a different product with a lower standard for meat content and the sample was reported unsatisfactory. The “Spam” label has been criticised in the past because it does not have any ordinary or common name other than “Spam”. The manufacturers of “Spam” were informed of the incident, which indicates that the use of a registered trade mark as an ordinary or common name may have disadvantages for the owner of the trade mark, and it is understood that the can labels are to be amended to include a common name as well as the trade mark.

Excessive amounts of lead in dried herbs were reported in 1970 and further instances of this were found in 1971. Four samples of dried sage were reported as unsatisfactory with lead contents from 13 to 20 part per million (Maximum legal limit: 10 part per million).

Successful prosecutions were instituted in respect of two samples deficient in meat content, one of braised steak in gravy (canned) and the other chicken in sauce (frozen).

TABLE A

Samples examined under the Food & Drugs Act

Article	Number examined			Number Adulterated or otherwise giving rise to irregularity		
	Formal	Informal	Total	Formal	Informal	Total
Milk	19	410	429	5	30	35
Almonds, ground	-	1	1	-	-	-
Anchovies in oil (canned) ..	-	1	1	-	-	-
Apples, stuffed, in syrup (canned)	-	1	1	-	-	-
Apricots in sorbitol syrup (canned)	-	1	1	-	-	-
Baby Food - fruit based	-	4	4	-	-	-
Barley, pearl	-	2	2	-	-	-
Barley wine	-	1	1	-	-	-
Basil	1	3	4	-	-	-
Batter mix	-	1	1	-	-	-
Beans, baked, with hamburgers in tomato sauce (canned) ..	-	2	2	-	-	-
Beans, baked, with pork sausages in tomato sauce (canned) ..	-	2	2	-	-	-
Beans, green (frozen)	-	1	1	-	-	-
Beef spread	-	1	1	-	-	-
Beer	2	4	6	-	-	-
Beer, black	-	1	1	-	-	-
Beverage, caffeine-free, instant	-	1	1	-	-	-
Beverage, cereal	-	1	1	-	-	-
Bilson's food	-	1	1	-	-	-
Biscuits	-	3	3	-	1	1
Biscuits, diabetic	-	1	1	-	-	-
Biscuits, slimmers'	-	1	1	-	-	-
Blackcurrants (frozen)	-	1	1	-	-	-
Bonemeal tablets	-	1	1	-	-	-
Brandy	1	-	1	1	-	1
Brawn	-	3	3	-	-	-
Breadfruit (canned)	-	1	1	-	-	-
Broccoli (frozen)	-	1	1	-	-	-
Cabbage, red, with apples (canned)	-	1	1	-	-	-
Cheese fondue	-	1	1	-	-	-
Cheese spread	-	1	1	-	-	-
Chicken with rice (dehydrated)	-	1	1	-	-	-
Chocolate confectionery	-	3	3	-	-	-
Chocolate sauce	-	1	1	-	-	-
Chutney, apricot	-	1	1	-	-	-
Cod liver oil capsules	-	1	1	-	-	-
Cod roes (canned)	-	2	2	-	-	-
Coffee, instant	-	4	4	-	-	-
Colourings	-	1	1	-	1	1
Corn (canned)	-	1	1	-	-	-
Crab	-	1	1	-	-	-
Crab, dressed (canned or frozen)	1	4	5	-	1	1
Crab paste	-	1	1	-	-	-
Cream (frozen)	-	3	3	-	1	1
Cress	-	2	2	-	-	-
Currants	-	4	4	-	-	-
Curry rice	-	1	1	-	-	-
Dandelion coffee	-	1	1	-	-	-
Dates	-	5	5	-	-	-
Dessert (canned)	-	1	1	-	-	-

Article	Number examined			Number Adulterated or otherwise giving rise to irregularity		
	Formal	Informal	Total	Formal	Informal	Total
Dessert mix	—	4	4	—	—	—
Dolomite tablets	—	1	1	—	—	—
Egg powder, imitation	1	—	1	—	—	—
Fish cakes, (frozen)	—	2	2	—	—	—
Flavourings	—	2	2	—	—	—
Flour confectionery, buttered	—	1	1	—	—	—
Food, liquid, of plant origin (canned)	—	1	1	—	—	—
Fruit and nuts	—	1	1	—	—	—
Fruit in syrup (canned)	1	3	4	—	—	—
Fruit juice	1	9	10	—	—	—
Fruit, mixed, dried	—	1	1	—	—	—
Garlic, dried	—	1	1	—	—	—
Gin	2	—	2	—	—	—
Glucose tablets	—	1	1	—	—	—
Goor	—	1	1	—	—	—
Grape juice, compound (canned)	—	1	1	—	—	—
Gravy mix	—	2	2	—	—	—
Halibut liver oil capsules	—	1	1	—	—	—
Hazelnut spread	—	1	1	—	—	—
Herbs, mixed	—	1	1	—	—	—
Herring in sauce (canned)	—	1	1	—	—	—
Home winemaking and brewing materials						
Campden tablets	—	1	1	—	—	—
Heading liquid	—	1	1	—	1	1
Yeast nutrient	—	1	1	—	—	—
Horseradish, creamed	—	1	1	—	—	—
Jelly crystals	—	1	1	—	—	—
Kabli-chana, curried (canned)	—	2	2	—	—	—
Kidneys	—	3	3	—	—	—
Lemons	—	4	4	—	—	—
Lemons, prepared (canned)	—	1	1	—	—	—
Liquid meal	—	1	1	—	—	—
Liver, chicken	—	1	1	—	—	—
Lobster	—	1	1	—	—	—
Meat paste	—	1	1	—	1	1
Meat, potted or pressed	—	6	6	—	1	1
Meat products (canned)						
Corned beef	—	6	6	—	—	—
Lamb tongues with jelly	1	—	1	—	—	—
Chicken in jelly	1	5	6	—	1	1
Chopped ham with pork	—	2	2	—	—	—
Luncheon meat	—	1	1	—	—	—
Meat with gravy	—	10	10	—	2	2
Lamb chops in gravy	1	1	2	—	1	1
Steak in gravy with carrots	2	—	2	2	—	2
Corned beef loaf	—	1	1	—	—	—
Minced beef loaf	—	1	1	—	—	—
Ham and beef roll	—	2	2	—	—	—
Tongue roll with turkey	—	1	1	—	—	—
Ham roll with chicken	—	1	1	—	—	—
Chicken in sauce	1	1	2	1	1	2
Minced beef with onions and gravy	—	2	2	—	—	—
Chicken dinner	—	1	1	—	—	—
Irish stew	—	3	3	—	—	—
Cottage pie	—	1	1	—	—	—

Article	Number examined			Number Adulterated or otherwise giving rise to irregularity		
	Formal	Informal	Total	Formal	Informal	Total
Beef curry	—	3	3	—	—	—
Curry with chicken	—	1	1	—	—	—
Curried chicken	—	1	1	—	—	—
Gravy with meatballs	—	1	1	—	—	—
Savoury rice with bacon	—	1	1	—	—	—
Beans with pork in sauce	—	1	1	—	—	—
Mutton, peas and curry	—	1	1	—	—	—
Sausages	—	1	1	—	—	—
Frankfurters in brine	—	2	2	—	—	—
Sausages in brine	—	2	2	—	—	—
Steak in gravy (pie filling)	—	1	1	—	—	—
Meat and vegetable pies	—	3	3	—	1	1
Melon	—	1	1	—	—	—
Melon balls (frozen)	—	1	1	—	—	—
Melon, bitter (canned)	—	1	1	—	—	—
Milk shake mix	—	1	1	—	—	—
Mint	—	1	1	—	—	—
Mint sauce, concentrated	—	1	1	—	—	—
Molasses and yeast tablets	—	1	1	—	—	—
Muesli	—	1	1	—	—	—
Mushrooms in sauce (canned)	—	1	1	—	—	—
Nerve tonic	—	1	1	—	—	—
Oatmeal	—	2	2	—	—	—
Oats	—	1	1	—	—	—
Oil, olive	—	1	1	—	—	—
Oil, salad	—	1	1	—	—	—
Oil, Triad	—	1	1	—	—	—
Onions, fried	—	1	1	—	—	—
Oranges	—	1	1	—	—	—
Paté (canned)	—	3	3	—	—	—
Peas (frozen)	—	1	1	—	—	—
Pease pudding (canned)	—	1	1	—	—	—
Pineapple in water (canned)	—	1	1	—	—	—
Plaice	—	1	1	—	—	—
Potato chips (frozen)	—	1	1	—	—	—
Potato crisps	12	17	29	6	7	13
Potato, mashed, mix	—	2	2	—	1	1
Prawns (frozen)	—	1	1	—	—	—
Prawn coleslaw and tomato	—	1	1	—	—	—
Prawn crackers	—	1	1	—	—	—
Prawns, curried (frozen)	—	1	1	—	1	1
Prawn curry and rice (dehydrated)	—	1	1	—	—	—
Protein, vegetable, textured	—	1	1	—	—	—
Puddings, Yorkshire (frozen)	—	1	1	—	—	—
Raisins	—	2	2	—	—	—
Raspberry syrup	—	1	1	—	—	—
Rice	—	6	6	—	—	—
Rice milk pudding (canned)	1	—	1	—	—	—
Rum, white	3	—	3	—	—	—
Saccharin powder	—	1	1	—	—	—
Saccharin tablets	—	2	2	—	—	—
Sage	—	9	9	—	4	4
Sago	—	1	1	—	—	—
Salmon, potted	—	1	1	—	—	—
Salmon spread	—	2	2	—	—	—
Salt	—	2	2	—	—	—
Salt, compound	—	1	1	—	—	—
Salt, seasoning	—	1	1	—	—	—

Article	Number examined			Number Adulterated or otherwise giving rise to irregularity		
	Formal	Informal	Total	Formal	Informal	Total
Sardines in oil (canned)	—	1	1	—	—	—
Sauce mix	—	6	6	—	—	—
Sauce, oyster	—	1	1	—	—	—
Sauce, tartare	—	1	1	—	—	—
Sausages	3	1	4	1	—	1
Seafood garnish (canned)	—	1	1	—	—	—
Shrimps (canned)	—	1	1	—	—	—
Soft drinks	6	22	28	5	4	9
Soup (canned)	—	18	18	—	—	—
Soup block	—	2	2	—	—	—
Spaghetti with tomato sauce (canned)	—	1	1	—	—	—
Spam	—	1	1	—	1	1
Spinach (frozen)	—	1	1	—	—	—
Steak and kidney pies (frozen)	—	1	1	—	1	1
Stuffing mix	—	1	1	—	—	—
Sugar, brown	2	4	6	—	—	—
Sugar confectionery	—	7	7	—	2	2
Sugar syrup, raw	—	1	1	—	—	—
Sugar with low calorie sweetener	—	1	1	—	—	—
Sultanas	—	3	3	—	—	—
Sweetening drops	—	1	1	—	—	—
Sweetening powder	—	2	2	—	—	—
Tapioca	—	2	2	—	1	1
Tea, slimming	1	1	2	1	1	2
Tea mix, lemon	1	1	2	—	—	—
Thyme	1	2	3	—	—	—
Tomatoes (canned)	—	2	2	—	—	—
Tomato juice (canned)	—	2	2	—	—	—
Tomato juice cocktail	—	1	1	—	1	1
Tomato paste	—	1	1	—	—	—
Tomato rice	—	1	1	—	—	—
Tonic water	—	5	5	—	—	—
Top o' milk	—	1	1	—	—	—
Trifle	—	1	1	—	—	—
Trotters, pigs', in brine	—	1	1	—	—	—
Vegetables, mixed, in oil (canned)	—	1	1	—	—	—
Virol	—	1	1	—	—	—
Vodka	1	—	1	—	—	—
Vodka and mint cocktail	—	1	1	—	—	—
Whisky	1	—	1	—	—	—
Yeast extract spread	—	1	1	—	—	—
Yeast tablets	2	3	5	2	—	2

Article	Number examined			Number Adulterated or otherwise giving rise to irregularity		
	Formal	Informal	Total	Formal	Informal	Total
Alka-Seltzer tablets	-	1	1	-	-	-
Almond oil B.P.	-	1	1	-	-	-
Aluphos tablets	-	1	1	-	-	-
Ammoniated tincture of quinine B.P.C.	-	1	1	-	-	-
Antacid tablets	-	1	1	-	-	-
Antiseptic liquid (T.C.P.) ..	-	1	1	-	-	-
Ascorbic acid tablets, effervescent	-	1	1	-	-	-
Aspirin tablets, junior	-	2	2	-	-	-
Athera tablets	1	-	1	1	-	1
Beechams powders tablets ..	-	1	1	-	-	-
Benzac tablets	-	1	1	-	-	-
Bethanidine tablets B.P. ..	1	-	1	-	-	-
Bronchial mixture	-	1	1	-	-	-
Capriton tablets	-	1	1	-	-	-
Carbamazepine tablets B.P. ..	1	-	1	-	-	-
Cascara tablets B.P.	-	1	1	-	-	-
Castor oil B.P.	-	1	1	-	-	-
Codeine linctus B.P.C.	-	4	4	-	-	-
Codis tablets	-	1	1	-	-	-
Cooling powders, children's ..	-	1	1	-	-	-
Cough mixture	1	1	2	1	-	1
Cream, baby	-	1	1	-	-	-
Dentinox	-	1	1	-	-	-
Disprin tablets, junior	-	1	1	-	-	-
Do-do tablets	-	1	1	-	-	-
Dr. Cassells tablets	-	1	1	-	-	-
Embrocation stick	-	1	1	-	-	-
Glycerine B.P.	-	1	1	-	-	-
Herbal syrup	-	1	1	-	-	-
Herbal tablets	-	2	2	-	-	-
Indomethacin capsules B.P. ..	1	-	1	-	-	-
Infants powders	-	1	1	-	-	-
Insomnia tablets	-	1	1	-	-	-
Juno-Junipah tablets	-	1	1	-	-	-
Laxative tablets, children's ..	-	1	1	-	-	-
Limb-ease tablets	-	1	1	-	-	-
Little healers	-	1	1	-	-	-
Migrave tablets	-	1	1	-	-	-
Milk of Magnesia	-	1	1	-	-	-
Mil-par laxative	-	1	1	-	-	-
Moditen tablets	1	-	1	-	-	-
Mucron tablets	-	1	1	-	-	-
Myrrh, tincture of B.P.C. ..	-	1	1	-	-	-
Nasal spray	-	1	1	-	-	-
Nitrazepam tablets B.P. ..	1	-	1	-	-	-
Ointment, rubbing	-	1	1	-	-	-
Okasa tablets	-	1	1	-	-	-
Panets tablets	-	1	1	-	-	-
Panodol elixir	-	1	1	-	-	-
Paracodol tablets, junior ..	-	1	1	-	-	-
Paraffin, liquid B.P.	-	6	6	-	-	-
Paynocil tablets, junior	-	1	1	-	-	-
Petrolagar emulsion	-	1	1	-	-	-
Petrolagar emulsion with phenolphthalein	-	1	1	-	-	-
Ponstan capsules	1	-	1	-	-	-
Pripsen powders	-	1	1	-	-	-

Article	Number examined			Number Adulterated or otherwise giving rise to irregularity		
	Formal	Informal	Total	Formal	Informal	Total
Protriptyline tablets B.P. ..	1	—	1	—	—	—
Rutivite tablets	1	—	1	—	—	—
Sal volatile, spirit of B.P.C. ..	—	1	1	—	—	—
Serenace tablets	1	—	1	—	—	—
Sleeping tablets	—	1	1	—	—	—
Soothing powders, children's ..	—	1	1	—	—	—
Sylvasun tablets	—	1	1	—	—	—
Teething tablets	—	1	1	—	—	—
Throat pastilles and lozenges ..	—	3	3	—	—	—
Throat tablets, children's ..	—	1	1	—	—	—
Tonic tablets	—	1	1	—	1	1
Trimipramine maleate capsules	1	—	1	—	—	—
Trimipramine tablets B.P. ..	1	—	1	—	—	—
Vitamin A and D capsules ..	—	1	1	—	1	1
Vitamin tablets	—	1	1	—	—	—
Witch hazel, distilled B.P.C. ..	—	2	2	—	—	—
Zinc, starch and talc dusting- powder, B.P.C.	—	1	1	—	—	—
TOTAL	82	870	952	26	69	95

Total number of samples analysed during the year, 952

Total number of samples adulterated, 95 = 10·0%

TABLE B
Unsatisfactory Milks, 1963 - 1971

Year	Total No. of milk samples	No. Unsatis- factory	No. Sub- standard	Type of adulteration or reason for unsatisfactory report	% Unsatis- factory	% Adulter- ated	% Sub- standard
1971	429	35	0	11 contained added water 10 deficient in fat 2 contained antibiotic 13 failed Methylene Blue test	8.0	8.0	0
1970	465	49	7	24 contained added water 5 deficient in fat 4 contained antibiotic 13 failed Methylene Blue test 1 failed pasteurisation test (phosphatase present)	10.5	9.0	1.5
1969	440	16	2	2 contained added water 2 deficient in fat 10 failed Methylene Blue test	3.6	3.2	0.4
1968	402	18	7	7 deficient in fat 3 failed Methylene Blue test 1 contained added water	4.5	2.8	1.7
1967	545	14	10	3 contained antibiotic 1 deficient in fat	2.6	0.6	2.0
1966	572	42	36	5 contained antibiotic 1 contained added water	7.3	1.0	6.3
1965	666	37	34	2 deficient in fat 1 failed pasteurisation test (phosphatase present)	5.6	0.5	5.1
1964	662	8	8	No adulterated samples	1.2	0	1.2
1963	595	11	8	3 contained added water	1.8	0.5	1.3

TABLE C
UNSATISFACTORY MILK SAMPLES

Sample No.	Formal or Informal	Type	Nature of Adulteration or Irregularity
7983	Informal	Sterilised	Fat 3·6 per cent, Solids-not-fat 8·5 per cent, Freezing-Point Depression (Hortvet) 0·521°C. Freezing-Point Depression indicates presence of at least one per cent extraneous water.
7989	Informal	Pasteurised	Fat 3·6 per cent, Solids-not-fat 8·4 per cent, Freezing-Point Depression (Hortvet) 0·521°C. Solids-not-fat is below the presumptive minimum of 8·5 per cent and Freezing-Point Depression indicates presence of at least one per cent extraneous water.
328	Formal	Pasteurised	Fat 3·6 per cent, Solids-not-fat 8·4 per cent, Freezing-Point Depression (Hortvet) 0·522°C. Solids-not-fat is below the presumptive minimum of 8·5 per cent and Freezing-Point Depression indicates presence of at least one per cent extraneous water.
7993	Informal	Pasteurised	Fat 3·5 per cent, Solids-not-fat 8·55 per cent, Freezing-Point Depression (Hortvet) 0·523°C. Freezing-Point Depression indicates presence of at least one per cent extraneous water.
8006	Informal	Sterilised	Fat 3·45 per cent, Solids-not-fat 8·35 per cent, Freezing-Point Depression (Hortvet) 0·519°C. Solids-not-fat is below the presumptive minimum of 8·5 per cent and Freezing-Point Depression indicates presence of at least two per cent extraneous water.
8010	Informal	Untreated (Channel Islands)	Fat 5·5 per cent, Solids-not-fat 9·05 per cent, Freezing-Point Depression (Hortvet) 0·527°C. Penicillin present (0·05 I.U. per ml.). Freezing-Point Depression indicates presence of small amount of extraneous water.
339	Formal	Sterilised	Fat 3·5 per cent, Solids-not-fat 8·25 per cent, Freezing-Point Depression (Hortvet) 0·519°C. Solids-not-fat is below the presumptive minimum of 8·5 per cent and Freezing-Point Depression indicates presence of at least two per cent extraneous water.
8031	Informal	Untreated	Fat 2·8 per cent, Solids-not-fat 8·2 per cent, Freezing-Point Depression (Hortvet) 0·532°C. Both fat and solids-not-fat are below the presumptive minima of 3·0 and 8·5 per cent respectively but Freezing-Point Depression is normal.
8033	Informal	Untreated (Channel Islands)	Fat 4·7 per cent, Solids-not-fat 8·8 per cent, Freezing-Point Depression (Hortvet) 0·522°C. Freezing-Point Depression indicates presence of at least one per cent extraneous water.
8070	Informal	Untreated	Failed Methylene Blue test.
8083	Informal	Untreated	Failed Methylene Blue test.

Sample No.	Formal or Informal	Type	Nature of Adulteration or Irregularity
8085	Informal	Untreated (Channel Islands)	Fat 3.45 per cent, Solids-not-fat 8.35 per cent, Freezing-Point Depression (Hortvet) 0.532°C. Fat is below minimum limit of 4.0 per cent and solids-not-fat is below presumptive minimum of 8.5 per cent, but Freezing-Point Depression indicates that these deficiencies are not due to the presence of extraneous water.
8097	Informal	Pasteurised	Fat 3.55 per cent, Solids-not-fat 8.6 per cent, Freezing-Point Depression (Hortvet) 0.523°C. Freezing-Point Depression indicates presence of at least one per cent extraneous water.
8107	Informal	Untreated	Failed Methylene Blue test.
8112	Informal	Untreated	Fat 2.7 per cent, Solids-not-fat 8.55 per cent, Freezing-Point Depression (Hortvet) 0.534°C. Fat is below the presumptive minimum of 3.0 per cent.
8115	Informal	Untreated (Channel Islands)	Fat 3.75 per cent, Solids-not-fat 8.8 per cent, Freezing-Point Depression (Hortvet) 0.548°C. Fat is below the minimum limit of 4.0 per cent.
437	Formal	Untreated (Channel Islands)	Fat 3.65 per cent, Solids-not-fat 8.65 per cent, Freezing-Point Depression (Hortvet) 0.545°C. Fat is below the minimum limit of 4.0 per cent.
8120	Informal	Untreated	Penicillin present (0.075 I.U. per ml.).
8122	Informal	Untreated	Fat 2.7 per cent, Solids-not-fat 8.55 per cent, Freezing-Point Depression (Hortvet) 0.538°C. Fat is below the presumptive minimum of 3.0 per cent.
8147	Informal	Untreated	Fat 2.4 per cent, Solids-not-fat 9.1 per cent, Freezing Point Depression (Hortvet) 0.539°C. Fat is below the presumptive minimum of 3.0 per cent.
489	Formal	Untreated	Fat 2.65 per cent, Solids-not-fat 9.05 per cent, Freezing-Point Depression (Hortvet) 0.533°C. Fat is below the presumptive minimum of 3.0 per cent.
8157	Informal	Untreated	Fat 2.85 per cent, Solids-not-fat 8.5 per cent, Freezing-Point Depression (Hortvet) 0.536°C. Fat is below the presumptive minimum of 3.0 per cent.
551	Formal	Untreated	Fat 3.1 per cent, Solids-not-fat 8.47 per cent, Freezing-Point Depression (Hortvet) 0.504°C. Solids-not-fat is below the presumptive minimum of 8.5 per cent and Freezing-Point Depression indicates presence of at least four per cent extraneous water.
8179	Informal	Pasteurised	Failed Methylene Blue test.
8187	Informal	Pasteurised	Failed Methylene Blue test.
8221	Informal	Untreated	Failed Methylene Blue test.
8222	Informal	Untreated	Failed Methylene Blue test.

Sample No.	Formal or Informal	Type	Nature of Adulteration or Irregularity
8234	Informal	Untreated	Fat 2.9 per cent, Solids-not-fat 9.0 per cent, Freezing-Point Depression (Hortvet) 0.541°C. Fat is below the presumptive minimum of 3.0 per cent.
8249	Informal	Untreated	Failed Methylene Blue test.
8250	Informal	Untreated	Failed Methylene Blue test.
8251	Informal	Untreated	Failed Methylene Blue test.
8322	Informal	Untreated	Failed Methylene Blue test.
8332	Informal	Pasteurised	Fat 3.8 per cent, Solids-not-fat 8.6 per cent, Freezing-Point Depression (Hortvet) 0.526°C. Freezing-Point Depression indicates presence of a small amount of extraneous water.
8365	Informal	Untreated	Failed Methylene Blue test.

TABLE D
UNSATISFACTORY FOOD SAMPLES

Sample No.	Formal or Informal	Description of Sample	Nature of Adulteration or Irregularity	Observations
293	Informal	Chicken in jelly (canned)	Sample contained 65.3 per cent of meat.	Deficient in meat. The Canned Meat Product Regulations 1967 require at least 80 per cent meat.
307	Formal	Banana flavour syrup	Sample contained 0.040 per cent w/v saccharin, but the presence of saccharin was not declared on the label.	The Soft Drinks Regulations 1964 require the presence of saccharin in soft drinks to be declared on the label.
308	Formal	Pineapple flavour syrup	Sample contained 0.014 per cent w/v saccharin, but the presence of saccharin was not declared on the label.	The Soft Drinks Regulations 1964 require the presence of saccharin in soft drinks to be declared on the label.
310	Informal	Strawberry flavour syrup	Sample contained 0.018 per cent saccharin which was declared on the label, but in letters less than 1/12 in. in height.	The Soft Drinks Regulations 1964 require the height of the letters in the declaration of the presence of saccharin to be at least 1/12 in.
311	Informal	American cola	Sample contained 0.006 per cent saccharin which was declared on the label, but in letters less than 1/12 in. in height.	The Soft Drinks Regulations 1964 require the height of the letters in the declaration of the presence of saccharin to be at least 1/12 in.
329	Informal	Sugar confectionery	Label marked "Imitation Raspberry Flavor", but the words "imitation" and "flavor" were less prominent than the word "Raspberry".	The opinion was given that the words "imitation" and "flavor" must be no less prominent than the word "Raspberry".
330	Informal	Sugar confectionery	Label marked "Imitation Cherry Flavor", but the words "imitation" and "flavor" were less prominent than the word "Cherry".	The opinion was given that the words "imitation" and "flavor" must be no less prominent than the word "Cherry".
332	Informal	Potted meat	Sample contained 71 per cent of meat and the appearance was similar to that of pressed meat, not potted meat.	The opinion was given that this product should be described as "pressed meat" not "potted meat".

Sample No.	Formal or Informal	Description of Sample	Nature of Adulteration or Irregularity	Observations
347	Informal	Heading liquid	Sample contained 224 part per million of Sulphur Dioxide preservative.	Sulphur Dioxide is not permitted in Heading Liquid.
357	Informal	Meat paste	Sample contained 72.5 per cent of meat and was in the form of thin slices.	The opinion was given that this product should be described as "pressed meat".
365	Informal	Potato Crisps (cheese and onion flavour)	Sample contained 6.8 per cent protein (N x 6.25) and the packet was marked "Now - with added protein".	The amount of protein is not sufficient to justify the words "Now - with added protein".
377	Informal	Sage	Sample contained 20 part per million of lead.	The amount of lead is above the maximum limit of 10 part per million required by the Lead in Food Regulations 1961.
384	Informal	Potato Crisps (baked bean flavour)	List of ingredients included an item "M.S.G."	"M.S.G." should appear in full as "Mono-sodium glutamate".
385	Informal	Potato Crisps (ready salted)	Sample contained 7.4 per cent of protein (N x 6.25) and the packet was marked "Now - with added protein".	The amount of protein is not sufficient to justify the words "Now - with added protein".
388	Informal	Dressed crab (canned)	Sample contained 86.3 per cent of crab meat.	Dressed crab should contain at least 93 per cent crab meat.
389	Informal	Potato crisps (roast chicken flavour)	Sample contained 6.9 per cent of protein (N x 6.25) and the packet was marked "Now - with added protein".	The amount of protein is not sufficient to justify the words "Now - with added protein".
390	Informal	Potato crisps (salt and vinegar flavour)	Sample contained 6.6 per cent of protein (N x 6.25) and the packet was marked "Now - with added protein".	The amount of protein is not sufficient to justify the words "Now - with added protein".
392	Informal	Potato crisps (beef and onion flavour)	Sample contained 7.4 per cent of protein (N x 6.25) and the packet was marked "Now - with added protein".	The amount of protein is not sufficient to justify the words "Now - with added protein".

Sample No.	Formal or Informal	Description of Sample	Nature of Adulteration or Irregularity	Observations
393	Informal	Potato crisps (smokey bacon flavour)	Sample contained 6.9 per cent of protein (N x 6.25) and the packet was marked "Now - with added protein".	The amount of protein is not sufficient to justify the words "Now - with added protein".
404	Formal	Potato crisps (ready salted)	Sample contained 6.3 per cent of protein (N x 6.25) and the packet was marked "Now - with added protein". Proportion of total calorie value due to protein: 4.5 per cent.	The amount of protein is not sufficient to justify the words "Now - with added protein".
406	Formal	Potato crisps (cheese and onion flavour)	Sample contained 7.7 per cent of protein (N x 6.25) and the packet was marked "Now - with added protein". Proportion of total calorie value due to protein: 5.6 per cent.	The amount of protein is not sufficient to justify the words "Now - with added protein".
407	Formal	Potato crisps (smokey bacon flavour)	Sample contained 7.7 per cent of protein (N x 6.25) and the packet was marked "Now - with added protein". Proportion of total calorie value due to protein: 5.7 per cent.	The amount of protein is not sufficient to justify the words "Now - with added protein".
408	Formal	Potato crisps (roast chicken flavour)	Sample contained 7.3 per cent of protein (N x 6.25) and the packet was marked "Now - with added protein". Proportion of total calorie value due to protein: 5.4 per cent.	The amount of protein is not sufficient to justify the words "Now - with added protein".
409	Formal	Potato crisps (salt and vinegar flavour)	Sample contained 7.1 per cent of protein (N x 6.25) and the packet was marked "Now - with added protein". Proportion of total calorie value due to protein: 5.05 per cent.	The amount of protein is not sufficient to justify the words "Now - with added protein".

Sample No.	Formal or Informal	Description of Sample	Nature of Adulteration or Irregularity	Observations
410	Formal	Potato crisps (beef and onion flavour)	Sample contained 7.0 per cent protein (N x 6.25) and the packet was marked "Now - with added protein". Proportion of total calorie value due to protein: 5.2 per cent.	The amount of protein is not sufficient to justify the words "Now - with added protein".
413	Formal	Pineapple flavour syrup	Sample contained 0.040 per cent w/v of saccharin, but the presence of saccharin was not declared on the label.	The Soft Drinks Regulations 1964 require the presence of saccharin in soft drinks to be declared on the label.
414	Formal	Banana flavour syrup	Sample contained 0.040 per cent saccharin, but the presence of saccharin was not declared on the label.	The Soft Drinks Regulations 1964 require the presence of saccharin in soft drinks to be declared on the label.
415	Formal	Strawberry syrup	There was no evidence from the analysis that this sample contained fruit or fruit juice and the label bore no name and address or registered trade mark.	This product must be described as "Strawberry Flavour Syrup" and the label must carry a name and address or registered trade mark.
427	Informal	Slimming Tea	Sample is one of maté tea containing 0.98 per cent of caffeine and the label claimed it would bring about body-weight reduction without attention to diet.	The slimming claims of this product were questioned.
439	Formal	Braised steak in gravy with carrot (canned)	Sample contained 65.7 per cent of meat.	The Canned Meat Product Regulations 1967 require braised steak in gravy to contain at least 75 per cent meat.
440	Formal	Braised steak in gravy with carrot (canned)	Sample contained 70.9 per cent of meat.	The Canned Meat Product Regulations 1967 require braised steak in gravy to contain at least 75 per cent meat.

Sample No.	Formal or Informal	Description of Sample	Nature of Adulteration or Irregularity	Observations
441	Formal	Slimming Tea	Sample is one of maté tea containing 1.05 per cent of caffeine and the label claimed it would bring about body-weight reduction without attention to diet.	The slimming claims of this product were questioned.
442	Informal	Lamb chops in gravy (canned)	Sample contained 52.3 per cent of meat.	The Canned Meat Product Regulations 1967 require lamb chops in gravy to contain at least 75 per cent meat.
490	Formal	Beef sausage	Sample contained 49.2 per cent of meat.	The Sausage and other Meat Product Regulations 1967 require beef sausage to contain at least 50 per cent meat.
492	Informal	Meat and potato pie	Sample contained 5.0 per cent of meat.	The Meat Pie and Sausage Roll Regulations 1967 require a product sold as a Meat and Potato Pie to contain at least $12\frac{1}{2}$ per cent Meat.
504	Informal	Chicken in sauce (frozen)	Sample contained 52 per cent of meat.	The Sausage and other Meat Product Regulations 1967 require chicken in sauce to contain at least 60 per cent meat.
506	Informal	Curried Prawns (frozen)	Sample contained 20.7 per cent of prawns.	The opinion was given that curried prawns should contain at least 35 per cent of prawns.
519	Informal	Tomato Juice cocktail	The words "Tomato Juice" were printed on the label more prominently than the word "cocktail".	The opinion was given that the words "Tomato Juice" and "Cocktail" should be of equal prominence.
529	Informal	Turkey flavour sandwich biscuits	The container of this sample was marked "Turkey Sandwich".	The opinion was given that wherever the word "Turkey" appears on the label it must be followed immediately by the word "flavour".

Sample No.	Formal or Informal	Description of Sample	Nature of Adulteration or Irregularity	Observations
550	Informal	Spam	Sample consisted of meat with cereal and contained 82.7 per cent of meat.	Spam is the proprietary name of a brand of chopped pork and ham. This sample is not chopped pork and ham, but is meat with cereal, usually known as luncheon meat.
563	Informal	Colouring (Egg dyes)	Sample contained the following permitted artificial colours: Tartrazine, Carmoisine, Ponceau 4R and Indigo Carmine.	Not labelled in accordance with the Colouring Matter in Food Regulations 1966.
576	Informal	Mashed potato mix	Label description "Mashed Potato".	Should be described as "Mashed Potato Mix".
599	Informal	Sage	Sample contained 13.7 part per million of lead.	The amount of lead is above the maximum limit of 10 part per million required by the Lead in Food Regulations 1961.
600	Informal	Sage	Sample contained 13.5 part per million of lead.	The amount of lead is above the maximum limit of 10 part per million required by the Lead in Food Regulations 1961.
601	Informal	Sage	Sample contained 13.3 part per million of lead.	The amount of lead is above the maximum limit of 10 part per million required by the Lead in Food Regulations 1961.
605	Informal	Tropical Fruit Drink	The label bore the following description :- "A delicious blend of pineapple and apple juice with passion fruit, guava, peach, lime, and mandarin flavours". An illustration on the label showed pineapple, apple, lime, peach, passion fruit, mandarin and/or guava.	Illustrations should be restricted to pineapple and apple. The description "Tropical Fruit Drink" is not specific and should be "Pineapple and Apple Drink".
620	Formal	Chicken in sauce (frozen)	Sample contained 50 per cent of meat.	Sausage and other Meat Product Regulations 1967 require chicken in sauce to contain at least 60 per cent meat.

Sample No.	Formal or Informal	Description of Sample	Nature of Adulteration or Irregularity	Observations
625	Informal	Steak and Kidney pies (frozen)	Charred pastry, fibrous and miscellaneous debris in the upper pastry crust. 19.3 per cent of meat.	Foreign matter should not be present.
627	Informal	Cream (frozen)	Sample contained 35.7 per cent of fat compared with a label declaration of 40 per cent fat.	Deficient in fat.
666	Informal	Braised steak in gravy (canned)	Sample contained 63 per cent of meat.	The Canned Meat Product Regulations 1967 require braised steak in gravy to contain at least 75 per cent of meat.
667	Informal	Braised steak in gravy (canned)	Sample contained 72 per cent of meat.	The Canned Meat Product Regulations 1967 require braised steak in gravy to contain at least 75 per cent of meat.
697	Formal	Yeast tablets	Container marked "Most other Yeast Tablets are just 3-grain (300 mgm). are 5½ grain (552 mgm) tablets and have nearly twice the quantity of goodness per tablet.	The relation between Imperial and Metric Units is not correct and there is no justification for this statement.
698	Formal	Yeast tablets	Container marked:- Most other Yeast Tablets are just 3-grain (300 mgm) are 5½ grain (552 mgm) tablets and have nearly twice the quantity of goodness per tablet.	The relation between Imperial and Metric Units is not correct and there is no justification for this statement.
711	Informal	Tapioca	Sample contained two live booklice (Psocoptera species).	
712	Informal	Shandy	Alcohol Content: 1.45 per cent Proof Spirit.	Shandy should contain at least 1.5 per cent Proof Spirit.
795	Formal	Brandy 70° Proof	Alcohol Content: 65.1 per cent Proof Spirit.	Deficient in alcoholic strength.

TABLE E
UNSATISFACTORY DRUG SAMPLES

Sample No.	Formal or Informal	Description of Sample	Nature of Adulteration or Irregularity	Observations
305	Formal	Cough Mixture	Sample contained 0.23 per cent by volume of chloroform for a label claim of 0.4% by volume.	Deficient in chloroform.
700	Formal	Athera tablets	Sample consisted of tablets prepared from powdered vegetable drugs. Recommended on the label for the treatment of menstrual disorders and for regulating blood-pressure.	The claims made for these tablets in respect of menstrual disorders and blood pressure are questioned.
815	Informal	Vitamin A and D capsules	Sample contained 4,100 international units of vitamin A per capsule for a label claim of 6,000 international units per capsule. Container marked "Use Before Dec. 1969".	Deficient in Vitamin A.
821	Informal	Tonic tablets	The label bore the following list of ingredients:- Cinchonidine Sulphate 0.15 mg. Quinine Sulphate 0.7 mg. Phosphoric Acid 21.0 mg. Glycerophosphoric acid 0.03 mg. Glycerin 20.0 mg. Recommended on the label for "Weakness, Nervousness, Lassitude, Debility, Loss of Appetite, Sleeplessness and as an aid to recovery after illness".	These tablets contain no ingredient which has any hypnotic effect and there is no justification for any claim that they are of value for the treatment of sleeplessness.

Toxic Metals in Foods

The distribution of toxic metals in the environment generally continues to demand the attention of those concerned with public health. Examination of foods for traces of these toxic metals is a regular part of the laboratory's work on food and drugs. Reference has already been made to the presence of excessive amounts of lead in dried herbs, but the finding of appreciable traces of cadmium in certain foods is of special interest. Cadmium is a toxic metal associated in nature with zinc and areas in the vicinity of non-ferrous metal ore smelting operations are usually contaminated with cadmium to varying degrees. It is not known to play any essential role in either plant or animal nutrition.

Two groups of foods were examined for cadmium, firstly shellfish and crustacea and products including them, in view of the known fact of the tendency of these creatures to concentrate toxic metals from sea water, and kidneys since research work in the Swansea area indicates that in some animals cadmium is concentrated in the kidney. The results of these tests for cadmium are set out below:-

	Cadmium (Cd) part per million
Cornish Crab Soup, concentrated	1.04
Cornish Lobster Soup (crab listed as an ingredient) ..	0.94
Sea-Food Garnish (crab listed as an ingredient)	2.04
Cornish Mussel Soup, concentrated	0.08
Cornish Scallop Soup, concentrated	0.04
Crab (fresh)	
White meat	0.09
Dark meat	2.3
Remainder (inedible part but not including shell) ..	1.7
Lobster (fresh)	
White meat	0.13
Remainder (inedible part, but not including shell) ..	5.0
Lambs Kidneys	0.04
Bovine Kidney	0.91

In crabs and lobsters it is clear from these results that the cadmium is in the dark meat and internal organs but not in the white meat from the limbs of the animals.

There is no legal limit in the U.K. for cadmium in food, which means that the analyst must decide at what level cadmium is likely to constitute a danger to health, a matter of some difficulty at the present state of knowledge. Further research is required into the incidence of cadmium in foods and the hazards to health of exposure to small amounts of cadmium in this way.

Food Complaints

Many samples of foodstuffs are submitted as a result of complaints by members of the public to public health inspectors. Table F gives details of these complaints and samples examined in 1971. Not all complaints are found to be justified, but those complaint samples reported as satisfactory are also included in the table.

Compared with 1970, rather fewer cases of insect contamination were investigated in 1971, but instances of foreign matter and mouldy or decomposed food remained at similar levels to previous years.

Some of the causes of complaint call for more comment, either because of the unusual nature of the contamination or some other special circumstance. The milk bottle with the inside of the base covered with a black charred deposit should certainly have been stopped by someone at the dairy or by the roundsman before it reached the consumer. Damage to canned foods after leaving the factory but before sale to the customer must be mentioned. Extensive growth of mould in a canned ham was an instance of this and was almost certainly caused by a blow from a knife used to open cartons of canned goods in a supermarket. This method of opening the cartons is quite unnecessary and merely saves a few minutes in unpacking and stacking the cans.

An unusual type of complaint was that of the instant coffee which caused a clotting effect with sterilised milk. Experiments in the laboratory showed that the effect only occurred with sterilised milk and required a minimum temperature of the coffee-hot water mixture for the effect to be seen. A simple remedy is of course to allow the coffee infusion to cool slightly before adding the milk, but the manufacturers agreed the particular delivery was not up to the usual standard and indicated that they would modify the quality control procedures so as to prevent any recurrence of the complaint.

TABLE F
FOOD COMPLAINTS

Serial No.	Product	Nature of Complaint or other reason for being unsatisfactory
Insect Contamination		
M47/71/21	Canned Raspberries	Contained a housefly.
M82/71/33	Bread and Jam	A slice of bread spread with jam contained a dead wasp, covered with and partly immersed in the layer of jam.
M143/71/76	Bread	A dead cockroach was embedded in the outer crust of one of the end slices of a sliced loaf of bread.
M243/71/127	Bread	A dead cockroach was found embedded in the crust of a loaf of bread.
M307/71/183	Butter	Contained a dead fly.
Foreign Matter		
M5/71/4	Bread	Dark coloured foreign matter found in part of a sliced loaf proved to be mainly dirty dough with oily residues, such as might have been derived from dough handling machinery through insufficient cleaning.
M6/71/5	Trifle	A piece of plastic weighing about 100 mg. found in a pre-packed trifle was shown to be of a similar type to the plastic container used for these trifles.
M7/71/5	Orange Juice	A sample of concentrated orange juice for children was found to contain a black deposit consisting of grit and other miscellaneous debris.

Serial No.	Product	Nature of Complaint or other reason for being unsatisfactory
M20/71/10	Bread Roll	This sliced bread roll contained a piece of wood 1 cm. long and about 3mm. by 1 - 2mm. cross section.
M69/71/29	Potato Croquettes	A dark grey substance, roughly cylindrical in shape, about 1 cm. long and 0.5 cm. in width was found in this sample. Microscopic examination showed it to consist mainly of starch and potato tissue and it is likely it was the result of insufficient cleaning of handling machinery.
M84/71/35	Pasteurised Milk	This one-pint bottle of milk had a dark brown-black deposit covering most of the bottom of the bottle. Examination of this deposit suggested that it consisted of charred milk residues which had not been completely removed by the normal bottle-washing process. This deposit was so obvious to even a casual observer, that it should have been detected before the bottle reached the consumer.
M103/71/41	Potato Crisps	A piece of blue-green plastic sheet about 2 cm. by 1 cm. was found in this bag of potato crisps. The appearance of the surface of the plastic sheet indicated severe abrasive wear such as would have been found in broken belting material.
M122/71/52	Sandwich	This barm-cake sandwich had a filling of yellow piccalilli-like material and embedded in one of the slices of barm-cake was a piece of glass 1.5 cm. by 0.5 cm. A partly used piccalilli jar with a broken lip or rim was found on the premises where the sandwich was sold.
M208/71/109	Limeade	This sample of limeade contained a metal hairgrip. When received in the laboratory the colour of the sample was noticeably paler than is usual for limeade and after a further day had become almost colourless. This decolourisation is in all probability due to chemical reduction of the artificial colouring by the reaction of the metal of the hairgrip with the acid in the limeade. It was established by experiments with new hair-grips in another bottle of the same brand of limeade, that it would take 7-12 days for this decolourisation to take place at ordinary room temperature and thereby an opinion could be given of the approximate time when the hair-grip had gained access to the complaint sample.
M216/71/105	Chipitos	This sample contained foreign matter in the shape of loose fibrous material, which was shown to consist mainly of synthetic fibres.
M299/71/178	Pasteurised Milk	This one-third pint bottle of milk contained a milk bottle cap in a somewhat bent and crumpled condition. After washing this cap had a more dull surface appearance than a new cap and this dulling effect can be produced by contact with hot caustic alkali solution. A probable explanation is that the cap had been forced into the bottle, returned to the dairy and had been through the usual bottle-washing and filling processes without the foreign object being detected.

Serial No.	Product	Nature of Complaint or other reason for being unsatisfactory
M306/71/182	Cheese Sandwich	A partly consumed cheese sandwich contained a pellet of rodent excreta.
M314/71/186	Cornet Biscuit	The lower part of a cornet biscuit used for cornet ice-creams contained black particles and a similar whole unused biscuit had a blackened area around the upper rim of the biscuit. Examination suggested that this black material was charred biscuit, possibly due to biscuit batter sticking to the moulds during baking.
M394/71/237	Soft Drink	A bottle of a soft drink, from which most of the contents had been removed, contained a piece of glass 1.5 cm. long and weighing 0.1075g. The density of this glass, 2.485 g./ml. was shown by flotation to be the same as that of the glass of another bottle of the same kind and brand of soft drink from the same shop and therefore probably a piece from a broken bottle of the same type as that in which the piece of glass was found.
M444/71/278	Sliced Loaf	Pieces of mouse fur and tissue were firmly attached to and partly embedded in the crust of six adjacent slices near one end of this sliced loaf, the largest piece being about 5 cm. long.
M446/71/275	Butter Toffee	A rectangular piece of metal sheet 1 cm. in length, of aluminium or an aluminium-base alloy, was embedded in this piece of partly chewed toffee.
M465/71/288	Potato Crisps	Foreign matter stated to have been found in a packet of potato crisps was shown to consist of miscellaneous dirt and vegetable debris.
M485/71/289	Stuffing Mix	An opened packet of a stuffing mix contained a piece of adhesive fabric, 5 cm. by 2 cm., probably part of an adhesive plaster or bandage.
M500/71/298	Cream Cracker	Dark coloured foreign matter about 6 mm. across embedded in the surface of a cream cracker was shown to consist of leaf tissue, fibrous matter and wheat tissue.
M501/71/299	Steak with Gravy (canned)	Dark particles in a can of steak with gravy appeared to be charred vegetable matter.
M527/71/316	Apple Pie	Loose fibrous material, woody fragments and general dirt and debris covered an area 0.5 cm. across on the underside of the upper pastry crust of this apple pie.
M534/71/321	Cream Sandwich Cake	Dark grey-brown material in this cake was found to be mainly starchy matter and was probably derived from mechanical handling equipment which had not been adequately cleaned.
M541/71/329	Fruit Scone	Foreign matter stated to have been found in a fruit scone consisted of wood fragments, vegetable debris and animal hairs, probably human.
Mouldy Foods M33/71/16	and Foods Unsatisfactory Canned Ham	factory owing to Decomposition Extensive mould growth due to can having been pierced by a blow from a sharp instrument.

Serial No.	Product	Nature of Complaint or other reason for being unsatisfactory
M45/71/19	Sliced Loaf	Extensive mould growth throughout the loaf, so that the slices were held together by mould mycelium. Rhizopus, Penicillium, and Monilia species were identified.
M46/71/20	Scones	Three scones and several pieces of crust all had small areas of mould growth up to 0.5 cm. across. Penicillium and Aspergillus species present.
M48/71/23	Lemon Cheesc	Mould growth (Aspergillus species) covered most of the surface of this jar of lemon cheese.
M56/71/25	Pasteurised Milk	A full-one-pint bottle of milk showed several small patches of mould growth 0.5 to 3 mm. across.
M70/71/30	Pickled Beetroots	A jar of pickled beetroots had a thick growth of mould (Penicillium species) covering the entire surface of the contents of the jar.
M74/71/32	Fruit Pie	Several patches of mould growth, up to 2 cm. were present on the crust of this pie.
M424/71/266	Sliced Loaf	Areas of mould growth up to 5 cm. across were present on most of the slices. The predominant species of mould was one of the Penicillium group.
M445/71/279	Butter	Darkened areas near the surface of a packet of butter were shown to be mould mycelium.
M515/71/309	Fresh Cream Mandarin Dessert	Two areas of mould growth (Penicillium group) on the surface of this dessert.
M516/71/310	Fruit Salad in Syrup	An opened can of fruit salad, about $\frac{2}{3}$ full had an extensive growth of mould on the surface of the contents.
M322/71/197	Buttered Flour Cake	The butter in this sample was rancid.
M494/71/296	Cream Cake	This cake had an unpleasant odour and taste, probably due to rancidity of the fat.
M517/71/314	Sago Pudding (canned)	An opened can of sago pudding was about $\frac{3}{4}$ full and had a strong unpleasant odour resembling putrifying food, but in other respects the sample appeared normal.
Other Miscellaneous Complaints M4/71/2	Canned Rice Pudding	<p>This opened can of rice pudding, stated to have been opened the day before receipt in the laboratory, had a distinctly sour taste and smell. The ends were lacquered, but the body of the can was unlacquered and showed evidence of fairly severe attack on the tinplate. Analysis of the contents gave the following results:-</p> <p style="text-align: right;">Lead, Pb 0.4 p.p.m. Tin, Sn 77 p.p.m. Iron, Fe 11 p.p.m. Acidity, as Lactic acid, 0.30%</p> <p>The acidity is higher than usual for this product.</p>
M8/71/8	Milk Bottle Cap	A deposit in a milk bottle cap was shown to be largely fatty matter from the cream of the milk.

Serial No.	Product	Nature of Complaint or other reason for being unsatisfactory
M21/71/11	Sugar confectionery (Sweet)	This sample, in the form of a hollow tube, was alleged to have an unusual taste. The taste was certainly rather unpleasant, "synthetic" rather than fruity, but in other respects the sample was satisfactory.
M55/71/24	Chopped Ham & Pork (canned)	The meat in this can was very dark, almost black, where it had been in contact with the ends of the side-seam of the can. A possible reason is damage to the lacquer coating at the ends of the seam, exposing the metal and resulting in sulphide stains on the meat.
M114/71/45	Cod Liver Oil	A deposit inside the cap of a bottle of cod liver oil appeared to be resinous material produced by oxidative polymerisation of the oil.
M117/71/53	Corned Beef	This can of corned beef showed marked discolouration of the meat and attack on the internal surfaces of the can, but analysis did not reveal any excessive metallic contamination.
M171/71/92	Instant Coffee	This instant coffee was the subject of a complaint that it produced a clotting effect when milk was added. This effect was confirmed, but it was also shown that the effect occurred only with sterilised milk and was temperature dependent. No clotting occurred if the infusion of coffee was allowed to cool slightly before adding milk. This clotting effect could not be produced with other samples of the same brand nor with samples of other brands of coffee, and the sample was held to be of inferior quality. Discussion with the manufacturers resulted in modifications to their quality control tests.
M421/71/263	Guinness Stout	An opened bottle carrying a Guinness Stout label contained a small amount of a somewhat viscous pale brown liquid which was found to be an alkaline detergent of a similar type to that used in the bottle-washing process at the factory where the stout had been bottled. A drinking glass from which this stout was said to have been drunk by the complainant was also found to contain traces of detergent.
M502/71/300	Canned Grapefruit	A complaint of excessive corrosion of the internal surfaces of a can of grapefruit resulted in the almost empty opened can and the separated contents (grapefruit segments and syrup) being submitted for analysis. The contents were found to contain 340 part per million of Tin and 100 part per million of Iron, which are excessive but there appeared to be some doubt about the length of time which had elapsed between the opening of the can and the removal of the contents particularly in view of the fact that when received in the laboratory the can itself had several patches of rust on the inside surfaces.

Serial No.	Product	Nature of Complaint or other reason for being unsatisfactory
Complaint	sa	mples found to be
M31/71/14	Buttered Flour Cake	satisfactory It was stated that this buttered flour cake had a chlorphenolic (? T.C.P.) taste, but no such taste or other abnormality could be confirmed when examined in the laboratory.
M32/71/13	Baby Food	This canned baby food had a slightly darker appearance on the exposed surface when the can was opened, but was otherwise quite normal and wholesome.
M132/71/65	Kipper and lard	This partly consumed kipper which was stated to have been fried with lard, was said to have a bad taste, but this could not be substantiated, and both the kipper and the lard used seemed to be satisfactory.
M209/71/110	Draught Beer	A sample of draught beer, alleged to have a watery taste, contained 3.93 per cent by volume of alcohol and had a Specific Gravity of 1.0010 at 20°C.
M402/71/249	Pasteurised Milk	A sample of milk, said to be sour, appeared to be normal and had an acidity, calculated as lactic acid, of 0.16 per cent which is not excessive.
M412/71/258	Cured Fish Fillets	A complaint that these cured fish fillets were not in good condition could not be substantiated.
M495/71/297	Part of a cooked sausage	A small part of a cooked sausage was submitted as a result of a complaint that it contained no meat, but microscopic examination indicated that it did in fact contain meat.
M543/71/332	Shoulder Steak	A complaint that a piece of shoulder steak had a somewhat peculiar odour was confirmed, but the further allegation that it turned white when cooked was not substantiated.

Milk Samples

During 1971, 429 samples of milk were examined of which 19 were formal and the remaining 410 informal. The total includes 51 samples of Channel Islands Milk.

Details of unsatisfactory milk samples are given in Tables B and C.

	No. of samples	Fat %	Solids-not-fat %	Water %
1st Quarter, 1971	102	3.63	8.62	87.75
2nd Quarter, 1971	88	3.46	8.72	87.82
3rd Quarter, 1971	81	3.64	8.77	87.59
4th Quarter, 1971	107	3.81	8.75	87.63
For the year 1971	378	3.64	8.71	87.65
„ „ „ 1970	438	3.66	8.68	87.66
„ „ „ 1969	440	3.67	8.64	87.69
„ „ „ 1968	402	3.62	8.69	87.69
„ „ „ 1967	545	3.69	8.72	87.59
„ „ „ 1966	571	3.69	8.66	87.65
„ „ „ 1965	666	3.71	8.74	87.55

The above table shows the average composition of milk samples examined in each quarter and yearly averages over the last seven years. The averages do not include the Channel Islands samples since there is a higher legal minimum fat content (4 per cent) for Channel Islands Milk.

Designated Milks

In addition to chemical analysis, milk samples are also examined by the tests specified in the Milk (Special Designation) Regulations which include the Methylene Blue Test for keeping quality on Untreated and Pasteurised Milks, the Phosphatase Test for the efficiency of pasteurisation and the Turbidity Test for a check on the sterilisation process for sterilised milk.

Examination of Designated Milks

Designation	Number Examined	Satisfactory	Failed Meth. Blue Test	Failed Phos. Test	Failed Turbidity Test	Test Void
Untreated	130	113	11	—	—	6
Pasteurised	129	127	2	0	—	0
Sterilised... .. .	121	121	—	—	0	—
TOTALS ..	380	361	13	0	0	6

Antibiotics in milk

Of 124 samples of untreated milk examined for the presence of antibiotics, only 2 were shown to contain antibiotics.

Ice Cream Samples

Ice cream samples are taken with suitable precautions to prevent any extraneous contamination with bacteria and each sample is examined by a Methylene Blue Test similar to that used to assess the keeping quality of milk. The results of the test provide an indication of the growth of any bacteria which may have occurred and therefore of the keeping quality of the ice cream. The Methylene Blue Grading System is:-

Grade 1	Decolourisation time	over 4 hours
Grade 2	„ „	2½ to 4 hours
Grade 3	„ „	½ to 2 hours
Grade 4	„ „	Nil

Grades 1 and 2 are reported as satisfactory and grades 3 and 4 as unsatisfactory.

All samples are also examined bacteriologically for the presence of bacteria of intestinal origin, in particular the coliform group. The presence of large numbers of coliform organisms or any organisms of E. Coli Type I, which is typical of human or animal faecal matter, is an indication of unsatisfactory conditions in manufacture and/or handling.

Methylene Blue Tests on Ice-Cream

No. of Samples	Satisfactory	Unsatisfactory	Methylene Blue Grading				Test Void
			1	2	3	4	
59	47	6	38	9	3	3	6

Fifty-nine samples of ice-cream were submitted during the year, of which 47 were of a satisfactory grade by the Methylene Blue Test. Of these 47 samples 11 were reported unsatisfactory and 1 doubtful as a result of the examination for coliform organisms. Of the 6 samples with an unsatisfactory Methylene Blue Grading 1 was found to contain E. Coli Type I. No Methylene Blue Grade was obtained for six samples owing to a thermostat failure, but 3 of these samples were unsatisfactory as a result of the examination for coliform organisms.

Domestic Water Supplies

Two hundred and thirty-five samples of water from domestic premises in the Bolton area were examined bacteriologically and for pH value and lead content. The results show that a generally satisfactory quality has been maintained throughout the year.

A similar sampling scheme is operated in local authority areas other than Bolton, but within the supply area of the Bolton Waterworks Department. The results of these tests are reported to the Waterworks Engineer and Manager and monthly summaries of the results are now sent to the Medical Officers of Health for these local authorities.

Swimming Bath Waters

Samples of water from public swimming baths and from swimming baths in local schools are examined both chemically and bacteriologically. Recommendations are made to correct any abnormalities and to ensure that the treatment of the water is satisfactory.

A total of 177 such samples were examined in 1971, of which 119 were taken from the Corporation's public swimming baths and 58 samples from local schools. In addition 3 samples from the children's paddling pool were examined for the Parks Department.

As well as water samples from the baths themselves, samples of softened water from Bridgeman Street Baths have been examined. The quality of the feed water to the boiler at these baths is particularly critical and even Bolton's relatively soft waters must be softened to virtually zero hardness. Advice is given to ensure that the softening plant operates satisfactorily.

Fertilisers and Feeding Stuffs

Fifteen samples of animal feeding stuffs and 13 samples of fertilisers were examined in 1971. Of this total of 28 samples, the results of the analysis of 14, that is, half the total, did not conform with the declared composition. Details of these unsatisfactory samples are given in the accompanying tables and from these it can be seen that in one sample of fertiliser and 7 samples of feeding stuffs deficiencies were found which are to the prejudice of the purchaser.

UNSATISFACTORY FEEDING STUFFS

Sample No.	Article Sampled	Oil		Protein		Fibre		Other Constituents		Remarks
		D %	F %	D %	F %	D %	F %	D	F	
F9/71	Battery Lay Meal	3.0	4.2	16.5	17.7	5.5	3.4			High oil
F10/71	Weaners and Growers Compound	2.5	2.6	16.5	18.1	5.0	4.0	Copper 250 ppm	16 ppm	Deficient in copper
F12/71	Dairy cubes	3.5	4.2	17.0	14.6	7.0	4.2			Deficient in protein
F13/71	Calf rearing cubes	3.25	3.0	17.5	14.1	6.0	3.5			Deficient in protein
F23/71	Maxi Q Meal	2.5	2.6	16.5	17.6	5.0	4.3	Copper 250 ppm	150 ppm	Deficient in copper
F25/71	Battery Mash	4.0	3.1	16.0	14.1	4.0	3.3			Deficient in oil and protein
F26/71	Dairy Nuts	3.0	3.1	16.0	13.8	6.0	4.9			Deficient in protein
F28/71	Winter Dairy Nuts	3.0	3.2	16.0	13.7	9.0	6.1			Deficient in protein

D = Declared

F = Found

UNSATISFACTORY FERTILISERS

S'mple No.	Article Sampled	Nitrogen		Phosphoric Acid						Potash		Other Constituents		Remarks
		D %	F %	Soluble		Insoluble		Total		D %	F %	D	F	
				D %	F %	D %	F %	D %	F %					
F1/71	Lawn conditioner	6.0	6.84	1.3	1.32	3.2	3.15			3.0	2.98	Iron: 0.3%	0.39%	High nitrogen
F3/71	Superphosphate			18	19.7									High phosphoric acid
F5/71	Hoof and Horn	13	14.5											High nitrogen
F7/71	Rose fertiliser	3	3.7	4.25	4.26	12.75	12.67			7	7.2			High nitrogen
F17/71	Growmore fertiliser	7	6.1	6	6.20	1	0.77			7	6.95			Deficient in nitrogen
F19/71	Bone meal	3.5	4.22					18.0	17.9					High nitrogen

D = Declared

F = Found

Trade Descriptions Act

The following is a list of samples submitted for the purposes of the Trade Descriptions Act. In each case reports have been issued to the Chief Inspector of Weights and Measures.

- 3 pullovers
- 1 anti-glare device
- 1 sample of turpentine substitute
- 1 piece of dress material
- 1 pair of shoes
- 2 dresses
- 26 samples of petrol
- 1 proprietary all-purpose cleaner
- 9 samples of paraffin
- 1 frying pan

Samples of petrol and paraffin were examined by infra-red spectroscopy. An approximate octane number and star rating of a petrol can be deduced from its infra-red spectrum and this forms the basis of a rapid sorting test. Any suspicious samples can then be sent for an accurate octane number determination by an engine test.

Two grades of paraffin are recognised, one a premium grade suitable for use with un-flued free-standing heaters and the other a regular grade suitable only for flued heating appliances. These two grades of paraffin are readily distinguished by their infra-red spectra.

Consumer Protection Act

Seven samples of toys have been examined for the purpose of the Consumer Protection Act. No samples were found to contain amounts of metals in excess of the limits laid down by the Toys (Safety) Regulations 1967.

Atmospheric Pollution

Measurement of the levels of smoke and sulphur dioxide in the atmosphere have continued at eight sites within the Borough of Bolton and the monthly averages for each site are shown in Tables G and H. The block diagrams (histograms) show the summer, winter and overall yearly averages for all sites for the 10 year period 1962 - 1971.

The average figure for smoke pollution is slightly higher than that for 1970, but appreciably less than the pre-1970 figures. The figure for sulphur dioxide shows a welcome fall compared with previous years, but it must be stressed that this could be due either wholly or partly to favourable external factors such as the weather.

Waterworks Committee

3,542 samples were examined for the Waterworks Department, a substantial increase compared with previous years (2,707 in 1970 and 2,577 in 1969). Most of the increase is due to the fact that 1971 was the first full year of operation of a revised water-sampling scheme which was introduced near the end of the previous year.

Every source of supply is sampled at least weekly and samples are taken from the larger sources of supply at least twice a week. In addition to the routine bacteriological tests, these samples are submitted to a part chemical examination which includes pH value, colour (Hazen scale), residual chlorine, iron, aluminium and, in the case of two sources which require removal of manganese as part of the treatment, manganese estimations are carried out. These tests are designed to ensure the hygienic safety of any water entering the distribution system and to assess the efficiency of the operation of the treatment plants (filter stations). At each filter station samples of both the raw water and the treated (filtered) water are taken. In 1971 679 samples of raw water and 1,552 samples of treated water were examined.

The quality of the water delivered from the consumers' taps is ultimately what matters and to assess this regular samples are taken from the distribution system, mainly from domestic premises. During 1971 940 samples were taken for this purpose and in addition to the tests for bacteriological safety, these samples are examined for pH value, colour (Hazen scale), residual chlorine and lead. No significant amounts of lead were found in any sample and the overall quality of the water in distribution has been satisfactory. This total figure for distribution samples includes 235 samples taken from domestic premises within the Borough of Bolton and examined for the Medical Officer of Health.

Sixty-seven samples of raw and treated water were subjected to a more extensive chemical examination (i.e., full chemical analysis) and measurements of radioactivity (for total β - activity) were made on 18 samples.

The investigation of complaints from consumers accounted for 102 samples and a further 156 samples were examined for other purposes including special investigations, some of which are mentioned below.

Increasing concern over environmental problems prompted the examination of all supply waters for traces of organo-chlorine pesticides and for the toxic metal cadmium, the latter in particular in view of the very low limit of 10 micrograms per litre (0.01 part per million) for potable water recommended by the World Health Organisation. No significant amounts of organochlorine pesticides were found and no cadmium was detected in any of the sources of supply, the limit of detection of the test used being about one tenth of the W.H.O. limit.

A somewhat unusual investigation followed the opening of the new Jumbles Reservoir in March, 1971. Soon after the new reservoir had been filled several springs appeared in the area at the foot of the embankment. Instances of this sort are not uncommon, since immediately a new reservoir is filled, the ground forming the bottom of the reservoir becomes subject to considerable hydraulic pressures and water may then find its way through any weaknesses or fissures in the bottom or sides of the reservoir and thereby escape. To prevent seepage of water either under or around the ends of a new embankment, the civil engineer puts a grout curtain by injection of cement under pressure, both below the embankment and at each end. To determine how large a grout curtain is necessary in any particular embankment is a matter of some difficulty, and sometimes the grout curtain has to be extended after the reservoir has been built. A much larger grout curtain could be injected at first, but this approach might be unnecessarily costly.

It is of some importance to the civil engineer to know whether the water from these springs is the result of any leak in the clay puddle core of the embankment or not. Detailed chemical analyses of samples from these newly-appeared springs were compared with the analysis of the water in the reservoir itself and from other natural springs in the neighbourhood (Jumbles Valley). The opinion was given that the water from the new springs had travelled some distance underground possibly via fissures etc., in strata recently flooded at the other end of the reservoir. This explanation appears to have been confirmed by on-site investigations by the engineering consultants and as a result an extension of the cement-grout curtaining of the embankment is to be carried out.

Since the filling of the Jumbles reservoir regular samples of the water have been taken and examined for the major algal nutrients, ammonia, nitrites, nitrates, phosphates and silica in conjunction with studies of the algal population by the Biology Department of the Bolton Institute of Technology. These studies are continuing and should provide useful information on the biology of a recently-created body of water.

New and improved methods of analysis are the concern of every analytical laboratory and even those not primarily devoted to analytical research can make a contribution. In 1971 a new and quicker method was developed for the determination of nitrate in water and details of the new method were published in the Journal of the Society for Water Treatment and Examination (Reference: P. Morris "A note on the ultra-violet spectrophotometric method for the determination of nitrate in water", Water Treatment and Examination, Vol. 20, page 132).

Samples from other Corporation departments, other local authorities and private samples

EDUCATION DEPARTMENT AND BOLTON SCHOOL	58 swimming bath waters
EDUCATION DEPARTMENT	4 samples of canned tuna
PARKS DEPARTMENT	3 waters from Queen's Park Paddling Pool
BOROUGH ARCHITECTS' DEPARTMENT	2 seepage waters 4 samples of plaster 1 sample of asphalt 3 samples of fuel oil
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT	1 sample of wood
MUSEUMS DEPARTMENT	1 water
WEIGHTS AND MEASURES DEPARTMENT	46 samples for examination under Trade Descriptions Act (see above) 7 toys for examination under Consumer Protection Act (see above) 4 samples of slimming tea 1 sample of yeast tablets
BOLTON AND DISTRICT JOINT SEWERAGE BOARD	1 effluent
ATHERTON URBAN DISTRICT COUNCIL	6 sewage effluents 5 stream waters
COUNTY BOROUGH OF BURY	1 sample of petrol
HINDLEY URBAN DISTRICT COUNCIL	1 sludge 4 effluents 2 waters
HORWICH URBAN DISTRICT COUNCIL	4 swimming bath waters 1 sewage effluent
TYLDESLEY URBAN DISTRICT COUNCIL	7 swimming bath waters
WESTHOUGHTON URBAN DISTRICT COUNCIL	3 effluents 1 seepage water
COUNTY BOROUGH OF WIGAN	12 deposit gauge samples
PRIVATE SOURCES	14 swimming bath waters 9 waters 1 sample of concrete 1 sample of concrete additive 1 sample of sugar 5 samples of sage 3 samples of parsley 2 samples of beer 4 samples of paper or paper pulp 1 sample of fly ash 2 toys 1 sample of tablets

TABLE G
Atmospheric Pollution
Smoke—Daily Averages
(Micrograms per cubic metre of air)

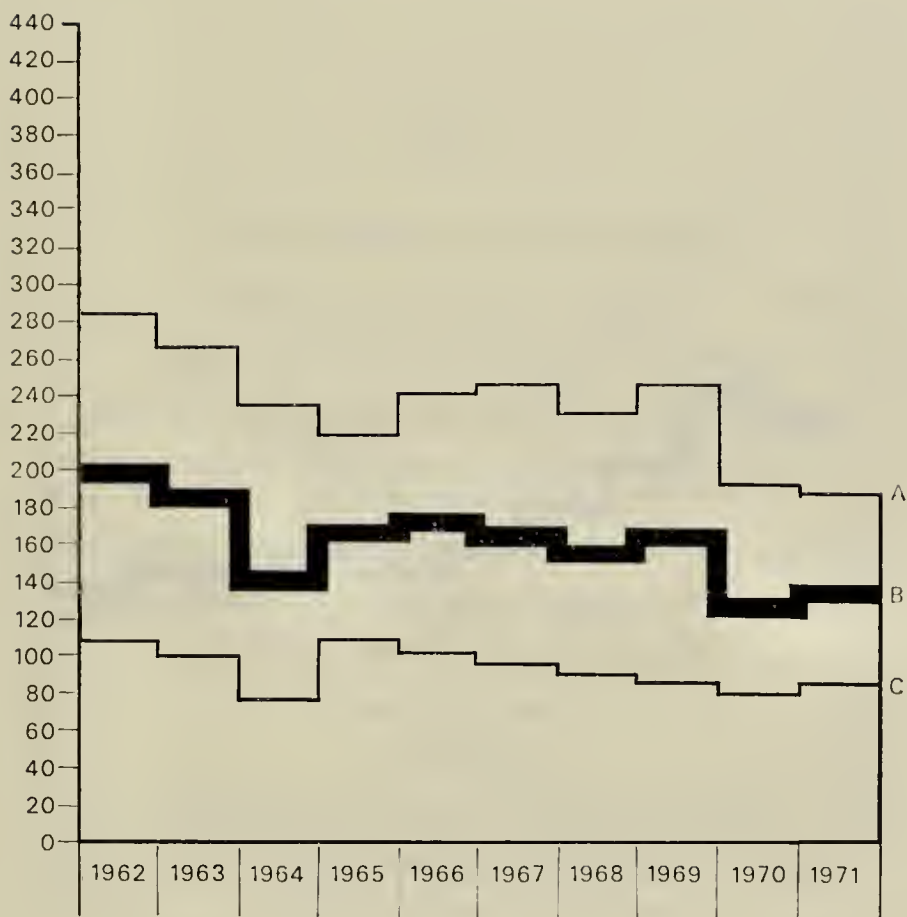
Site	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Daily averages of each site for			
													1971	1970	1969	1968
1 Johnson Fold ..	209	171	152	140	83	65	36	59	78	142	123	161	118	107	141	123
2 Astley Bridge Clinic	250	199	154	124	82	65	44	63	95	156	170	188	133	133	224	220
3 Tonge Moor.. ..	251	228	186	139	103	77	60	85	125	189	204	224	156	156	188	183
4 Lostock Open Air School	136	107	81	99	48	28	22	30	55	106	98	101	76	69	91	88
5 Central Police Station	184	155	122	100	63	43	34	48	84	154	121	134	103	105	128	128
6 Withins Clinic ..	219	203	168	124	70	55	34	54	85	202	174	192	130	117	152	146
7 Lock Lane	214	172	134	128	74	53	35	50	87	170	127	161	117	114	138	194
8 Grecian Mill ..	329	270	212	180	97	73	42	62	105	246	210	198	168	148	198	146
Daily Average (each month) of all sites, 1971	224	188	151	129	77	57	38	56	89	171	153	169	125			
„ 1970	250	153	144	83	58	50	39	62	82	131	165	205		118		
„ 1969	268	240	221	135	95	59	41	55	84	150	213	315			156	
„ 1968	247	308	157	142	127	62	60	55	82	130	192	277				153

TABLE H
Atmospheric Pollution
Sulphur Dioxide—Daily Averages
(Micrograms per cubic metre of air)

Site	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Daily averages of each site for			
													1971	1970	1969	1968
1 Johnson Fold ..	220	149	131	125	104	65	72	72	106	155	104	129	119	128	122	139
2 Astley Bridge Clinic	263	191	153	126	112	75	75	74	122	145	151	161	137	158	188	192
3 Tonge Moor. . .	225	197	157	129	115	76	86	89	132	153	163	182	142	154	142	153
4 Lostock Open Air School	163	119	106	131	86	36	42	35	72	95	94	98	90	108	97	101
5 Central Police Station	218	191	155	127	121	80	87	80	121	157	131	141	126	164	179	155
6 Withins Clinic ..	232	204	167	153	128	80	80	84	130	188	159	173	148	151	147	149
7 Lock Lane	217	158	144	147	120	72	74	75	126	176	117	132	130	139	137	139
8 Grecian Mill ..	198	165	174	164	152	103	89	101	141	199	176	135	150	173	165	194
Daily Average (each month) of all sites, 1971	217	172	148	138	117	73	76	76	119	159	137	144	131			
„ 1970	256	187	164	112	96	252	48	99	106	135	143	163		147		
„ 1969	218	184	198	130	121	98	79	76	108	148	160	251			147	
„ 1968	178	284	147	151	131	81	85	80	112	164	188	231				153

ATMOSPHERIC SMOKE

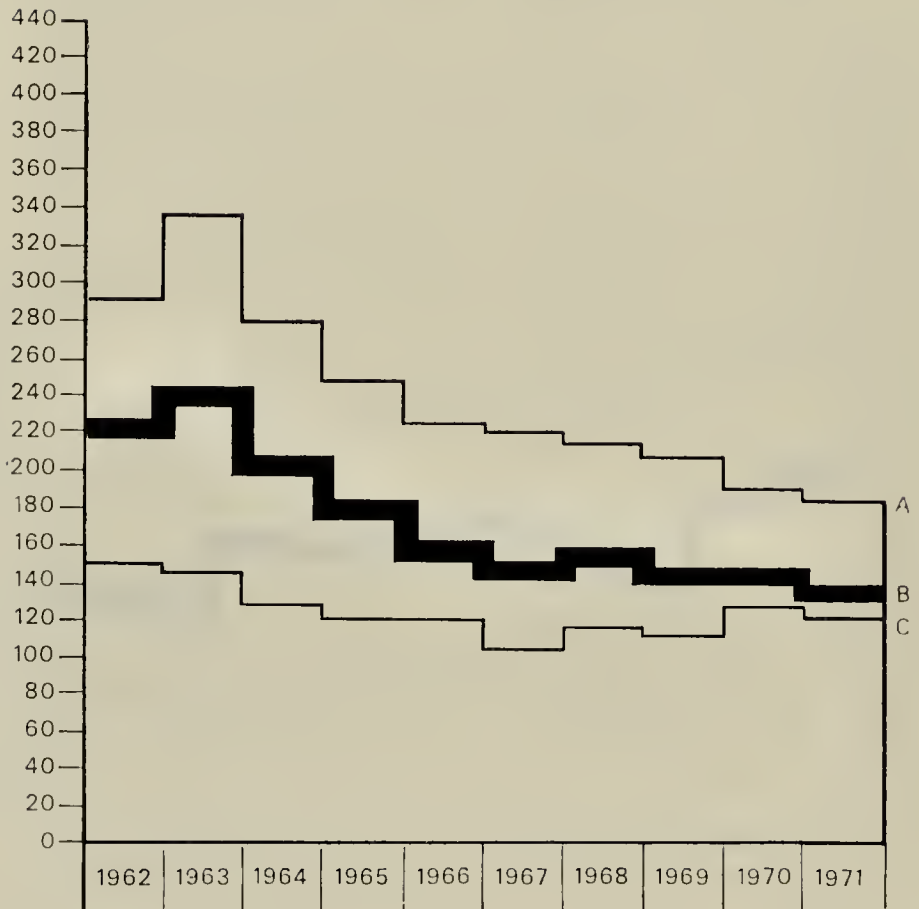
Micrograms per cubic metre of air



- A Jan. to Mar. and Oct. to Dec.
B Whole Year
C April to September

ATMOSPHERIC SULPHUR DIOXIDE

Micrograms per cubic metre of air



- A Jan to Mar. and Oct. to Dec.
- B Whole Year
- C April to September

PART V

ADDITIONAL INFORMATION

Fluoridation of Water Supplies

Health Department Clerical Services

Medical Examination of Corporation Employees

National Assistance Act, 1948 - Section 47

Persons in need of Care and Attention

The Incidence of Blindness, Epilepsy and Cerebral Palsy

Work done on behalf of the Children's Committee

Co-ordinating Committee - Problem Families

Nursing Homes

Cremation

Rehousing on General Medical Grounds

Baths and Wash-houses

Meteorological Summary

FLUORIDATION OF WATER SUPPLIES

The referendum held in 1968 upon the advisability of adding fluoride to the Bolton water supply has temporarily ended much of the local debate, but this is not reflected in the national picture. Since the referendum, fluoride has been added to the water supply of nearly one and a half million people and other areas of the north-west are soon likely to be added to this figure.

The general picture of dental health is extremely gloomy in Bolton. The amount of dental caries present in children's teeth is very high whilst the over-worked dental service has great difficulty in carrying out treatment which helps to conserve the teeth. Local dentists think that only fluoridation of the water supply can make any substantial contribution to better dental health. Whilst it is certain that frequent brushing of the teeth, reduced consumption of sweets and regular dental inspections would produce a considerable improvement, these measures are not available for the children of parents who show little interest in their children's health. Improvement in these cases can only be obtained by taking measures, such as the fluoridation of water supplies, which will not need the co-operation of the parents.

No evidence has been produced which would indicate that the level of fluoridation needed to improve dental health (one part per million) would interfere with health in any way and there are many areas of the world where fluoride occurs naturally in the water supply in much higher quantities. The only difference between people living in these areas and other populations is a much lower incidence of dental caries.

MEDICAL EXAMINATION OF CORPORATION EMPLOYEES

The number of medical examinations carried out during the year was 1,050, involving 1,025 persons. Four hundred and thirty nine persons were considered fit to enter the Superannuation or Sickness Payment Schemes without medical examination. A summary of the medical examinations is shown in the following table:-

Examination for—	No. of persons examined		No. of persons found unfit	
	Males	Females	Males	Females
Entry into Superannuation Scheme	127	72	6	2
Entry into Sickness Payment Scheme	51	226	2	8
Other medicals, e.g., fitness to resume employment, etc.	41	38	—	—
Retirement on Medical grounds	5	1	—	—
Surrender of part of superannuation allowance ..	1	—	—	—
Fitness to be employed as a teacher	44	38	—	—
Fitness for admission to a Training College	78	162	—	—
Issue of H.G.V. Licence	35	—	—	—
Medical examinations carried out at the request of other authorities	5	3	—	—
Re-examinations	9	16	—	—
Fitness to teach after leaving Bolton College of Education	32	26	—	—
TOTALS	428	622	8	10

Of the above, there were 8 incomplete examinations, i.e., where a decision was deferred pending the result of further investigations, or where the persons concerned were asked to attend for re-examination at a later date.

CHEST X-RAYS:

Five hundred and thirty-nine persons were sent to Mass Radiography Units for chest X-ray. Of these, 278 were students leaving the Bolton College of Education. One hundred and twenty-three persons were sent because their employment involved work with children; eight of these were appointed to posts on the nursing staff. All students examined in connection with their fitness for admission to training colleges were advised to have a chest X-ray and information regarding facilities available at the Mass Radiography Unit was supplied.

All employees in the School Meals Service were advised to have a chest X-ray when the Mass Radiography Unit was operating at the Civic Centre in December. The number of these employees who attended for X-ray was 532.

Eight persons were examined at the request of other local authorities.

In 439 cases of persons under 45 years of age, who were candidates for entry to the Corporation's Superannuation and Sickness Payment Schemes, a medical examination was not considered necessary.

Medical examinations were carried out on all persons over 45 years of age, and on employees whose work involved driving duties, home helps, who work mainly in the homes of people not in good health, all new entrants to the teaching profession and students seeking admission to training colleges.

Two hundred and two persons under 45 years of age (94 males; 108 females) were examined at the request of the medical officer.

Eight persons were examined at the request of the Motor Taxation Department concerning their fitness to drive a motor vehicle.

An analysis of the conditions which caused persons examined for entry in to the Superannuation and Sickness Payment Schemes to be found unfit is shown in the following table:

	Superannuation Scheme		Sickness Payment Scheme	
	Males	Females	Males	Females
Cardiovascular disease (including hypertension) ..	2	—	—	4
Respiratory system	2	—	1	1
Nervous system	—	—	1	2
Other conditions	1	—	1	3
TOTALS	5	—	3	10

The principal cause of failure to pass the medical examination was cardiovascular disease and this was due to hypertension in the majority of cases.

The number of people failing to pass medical examinations in the last ten years is as follows:

1962	18
1963	19
1964	34
1965	44
1966	51
1967	46
1968	65
1969	20
1970	22
1971	18

NATIONAL ASSISTANCE ACT, 1948 - SECTION 47 PERSONS IN NEED OF CARE AND ATTENTION

Powers exist under Section 47 of the National Assistance Act, 1948 (as amended) for the compulsory removal of persons in need of care and attention to a hospital or to accommodation provided under Part III of the National Assistance Act. Such action is only taken as a last resort when a person is in an advanced state of neglect or suffering from grave chronic disease and is in great need of institutional care but is unwilling to go voluntarily.

During 1971, it was not necessary to use these statutory powers for though many elderly people were living in unsatisfactory conditions, they were able to be helped without using compulsion.

THE INCIDENCE OF BLINDNESS, EPILEPSY AND CEREBRAL PALSY

Blindness:

The Register of Blind Persons contained the names of 208 men and 236 women at the end of the year.

Forty-nine men and 119 women were registered as partially-sighted.

Epilepsy:

The Director of Social Services states that the Register of Handicapped Persons contained the names of 34 men and 25 women suffering from epilepsy. Of these, 5 men and 1 woman were in colonies for epileptics, 1 man was in a home provided by Bolton Corporation and 27 men and 24 women were in their own homes.

The Local Education Authority knew of 42 boys and 23 girls attending ordinary schools who were epileptics and maintained 1 child in a special school for epileptic pupils.

Cerebral Palsy:

Thirty seven males and thirty two females suffering from cerebral palsy were on the Register of Handicapped Persons maintained by the Director of Social Services.

The Local Authority was aware of 29 children with this handicap. Thirteen of these children were attending Birtenshaw Hall Special School and two children were attending other special schools; twelve children were attending ordinary schools and two were pre-school children.

Of the sub-normal and severely sub-normal persons known to the Authority, 10 males and 19 females were suffering from cerebral palsy in addition to the mental handicap.

Facilities available for Handicapped Persons:

1971 was the first year when the effects of the implementation of the Chronically Sick and Disabled Persons Act could be determined. During the year, the Social Services Department began and extended the process of providing telephones, additional toilets, Terry lifts and other aids to the handicapped and the chronically sick.

WORK DONE ON BEHALF OF THE SOCIAL SERVICES COMMITTEE

From the 1st April, 1971, the Children's Department became the responsibility of the new Social Services Department. The routine supervision of children coming into here has been carried out by a medical officer of the Health Department and all the children have been examined at regular intervals as laid down by the Home Office Regulations. These examinations were carried out at the larger group homes, Braxmere, Crompton House, the Poplars and the family group homes.

Every month a medical officer has visited the Elizabeth Ashmore Nursery to examine the children and to carry out routine vaccinations and immunisations. All children for admission to or discharge from a home or nursery have been examined. They have also been examined when transferred from one home to another.

Medical Examinations:

No. of routine examinations	—	0 - 1 year	..	24
	—	1 - 5 years	..	114
	—	over 5 years	..	210
				<hr/>
		Total	348
				<hr/>

Nutritional Status:

The nutritional status of all children examined at routine medical examinations was satisfactory.

CO-ORDINATING COMMITTEE - PROBLEM FAMILIES

I am grateful to Mr. G. Taylor, Director of Social Services, for supplying the following information.

“During the year a total of 29 families, involving 139 children, were the subject of consideration. Of these, a total of 10 families (45 children) were newly reported cases.

At the end of the year a total of 6 families (27 children) remained under active consideration. Of these it was considered that one family was making satisfactory progress. The remaining five families were considered to have long-standing problems of a chronic nature and would need much guidance and assistance.

During the year a total of 23 families (112 children) were deleted from the register. One family (7 children) had been received into care. Another child, who had lived with relatives, was received into care. The case was subsequently deleted as this child's welfare had been the main cause for concern. Three families (8 children) left the area. The remaining 18 families were deleted from the register either because their needs had been met, or because the families were not longer justifying active concern.”

NURSING HOMES

The two registered nursing homes in the Borough were inspected regularly during the year and found to be satisfactory.

CREMATION

Details of cremations at the Overdale Crematorium over the past five years are given below:

Year	Number of Bolton Residents cremated	Cremations of persons from other areas	Total Cremations	Approx. percentage of deceased Bolton residents who were cremated
1967	1,257	1,975	3,232	63%
1968	1,373	2,136	3,509	65%
1969	1,466	2,316	3,782	66%
1970	1,409	2,443	3,852	66%
1971	1,440	2,470	3,910	67%

REHOUSING ON GENERAL MEDICAL GROUNDS

Consideration of cases for rehousing on medical grounds continued to be important work of officers of the Health Department.

During the year it was agreed that applicants for rehousing on medical grounds should make direct application to the Housing Department and this should include an account of an infirmity or incapacity. This statement would then be sent to the Medical Officer of Health, for his consideration, by the Chief Housing Officer. Only in those cases were the Medical Officer of Health considered it would be of real help to have a report from the patient's doctor should a request be made. This resulted in an increase in the number of cases to be considered.

The increasing number of those aged 65 and over is producing great strains on the medical and social services in Bolton and the rest of the country. Whenever possible, both in the interests of old people themselves and also of the community, it is desirable that they should be able to remain at home having necessary support from relatives, voluntary workers, the social and medical services.

The number of people in Bolton, as the following table shows, is likely to increase substantially up to 1981, after which there will be a slight reduction but the number of those aged 85 and over who make the greatest demands on services will show a continued increase, at least until the turn of the century.

PROJECTED POPULATION FIGURES FOR THOSE AGED 65 AND OVER

1961	20,046
1971	21,785 (actual census figure)
1981	24,379 (12% increase)
1991	24,389 (0.02% increase)
2001	24,097 (1.2% decrease)

The figures in the table are less than those we have used in recent years, the 1971 census giving a smaller figure than that derived by projection from the 1961 census.

The 1964 survey of Bolton's geriatric services showed the need for very much more special housing - up to 225 ground floor places with warden supervision, and 879 without warden supervision. With the increase in the number of old people since that time, the position is unlikely to be very different. A Health Department survey in 1969 of 670 old people in Bolton aged 85 to 89 years showed that 73 required rehousing.

Requests for rehousing on medical grounds are received from the individuals themselves, relatives, social workers, general practitioners, consultants and others. The usual reason for the request is that because of failing health the old person cannot get upstairs. Other reasons are tuberculosis, which is given a high priority, paralysis, special bathing needs in a house without a bath, a house which is now too big for the old folk living in it and an unmanageable garden. Sometimes the poor condition of the house itself makes rehousing necessary. Such houses are dealt with as Individual Unit Houses or by slum clearance. Each case is ordinarily visited by a health visitor who produces a report for the Medical Officer of Health to see. If necessary, a public health inspector makes a report on the house. The opinion of the patient's general practitioner or consultant is obtained where indicated. The Medical Officer of Health visits doubtful cases.

Because of the number of ground floor houses available it is impossible to recommend for rehousing individuals who cannot manage stairs when there is room for a bed downstairs and the toilet is reasonably accessible. Those living in houses which they do not fully occupy and cannot properly maintain cannot ordinarily be recommended unless there is some other supporting reason. The strict policy that has to be followed means that many of these old folk who are not recommended would undoubtedly be much more suitably housed and more comfortable in ground floor accommodation or the equivalent. For example, during 1971 the Health Department has dealt with 388 requests for rehousing - a considerable increase over 1970. Of these, 140 were recommended. Sixty-three others who could not be recommended would have benefitted by rehousing.

The following table gives the number of applications for rehousing on medical grounds, the number recommended and the number rehoused since 1968. The number of applications are for calendar years, but taking the total over the four years, this does not produce much discrepancy, particularly as the investigation of cases may take several weeks. Most of the applications are from old people.

No. of Applications	Cases Recommended			Cases Rehoused		
	Transfers	Waiting List	Total	Transfers	Waiting List	Total
(1968) 401	(1969/68) – 70	42	112	34	31	65
(1969) 408	(1969/70) – 77	40	117	45	40	85
(1970) 318	(1970/71) – 75	32	107	51	25	76
(1971) 388	(1971/72) – 101	57	158	89	22	111

This shows that although the numbers rehoused have increased, they have not kept pace with the number recommended. Unfortunately, assessment of matching recommendations against the number rehoused is not straightforward. Many recommendations are for particular areas where the old people have relatives and they will not consider other districts which would not help their problems and might even make them worse.

A breakdown of the cases dealt with during 1971 is as follows:

(i) No. received via Housing Department	140
(ii) No. received with medical certificate from general practitioners or hospital	201
(iii) No. received from applicants direct to Health Department and all other sources	47
Total No. of cases dealt with	388

(i) Housing Department Referrals (140):

Recommended		Not Recommended	Social Cases or Referred to Housing Dept.	I.U.H.	No further action	Not yet dealt with
Applicants	Transfers					
11	31	47	9	1	14	27

(ii) General Practitioner or Hospital Referrals (201):

Recommended		Not Recommended	Social Cases or referred to Housing Dept.	I.U.H.	Repairs being carried out	No further action	Not yet dealt with
Applicants	Transfers						
31	52	61	10	4	1	18	24

(iii) **Direct Application or Other Referrals (47):**

Recommended		Not Recommended	Social Cases or Referred to Housing Dept.	I.U.H.	No further action	Not yet dealt with
Applicants	Transfers					
6	9	14	3	1	9	5

No. recommended for rehousing	48
No. recommended for transfer ..	92
Total recommendations	140

BATHS

The year 1971 was a time for changing and re-thinking in many fields of recreation and in particular swimming.

Public demand is now changing as the social and working conditions change for everyone. Working hours are becoming a shorter and society in general more affluent.

The Amenity Services Committee are fully aware of the circumstances and the policy of the Committee for the Baths Department is one of redevelopment to cater for the new requirements.

During 1971, Rothwell Street slipper baths and wash house establishment was finally closed down completely. There is still a demand for the ladies' slipper baths service in the area and a new shower and slipper bath suite has been installed at High Street Baths. The increased efficiency of this new installation will effect a considerable saving.

Improvements and modifications were planned for all establishments during 1971 and work from these plans is scheduled to be carried out early in 1972.

Planning and research for the new swimming pool complex at Spa Road continued throughout 1971.

The Amenity Services Committee decided that the swimming facilities at Spa Road should form part of a larger recreational complex covering many forms of indoor and outdoor sporting facilities. The project is to be completed in two stages. The first stage will contain the swimming facilities which are a children's learner pool, a large 33 metre pool suitable for recreation and competition. A sauna bath and a cafeteria are also to be included.

The final decision regarding the provision of a diving pool and diving boards has not yet been taken and the Amenity Services Committee are awaiting further reports and information before taking the decision early in 1972.

The various establishments offered the following facilities:-

High Street	1 Plunge 9 Slipper Baths (Male)
Bridgeman Street	2 Plunges 20 Slipper Baths (Male) 5 Slipper Baths (Female) 1 Establishment Laundry
Moss Street	2 Plunges 10 Slipper Baths (Male) 2 Showers (Male) 6 Slipper Baths (Female) 1 Establishment Laundry

Rothwell Street

15 Slipper Baths (Female)

Great Moor Street

Turkish Baths

Attendances during the past three years are given below:-

Establishment	Plunges			Slippers			Turkish		
	1969	1970	1971	1969	1970	1971	1969	1970	1971
High St. ..	77,210	67,446	65,771	25,945	24,861	21,478	—	—	—
Bridgeman Street ..	98,206	70,500	81,127	38,572	33,553	31,313	—	—	—
Moss Street	107,601	111,204	108,027	34,120	34,142	29,457	—	—	—
Rothwell St.	—	—	—	20,853	14,531	12,920	—	—	—
Gt. Moor Street ..	—	—	—	—	—	—	8,472	8,072	7,208
TOTALS ..	283,017	249,150	245,925	119,490	107,087	95,168	8,472	8,072	7,208

SCHOOL CHILDREN ATTENDANCES:

1969	58,751
1970	56,446
1971	74,572

The school bathing figures have increased during the year. This is mainly due to the School season being extended from October to December.

Attendances:

The figures for plunge bathing again show a reduction when compared to previous years. However, the downward trend was reduced considerably during 1971 as can be seen by comparing the drop from 1969 to 1970 (33,867) with 1970 to 1971 (3,225).

The figures for slipper baths show a further decrease in attendances as was expected. The new building programmes and home improvement facilities are continually reducing the need for this service. Proposals have already been approved by the Council to condense the slipper bath service to Bridgeman Street, High Street and Moss Street. Rothwell Street has been closed.

The Turkish Baths have continued in the same pattern as the previous five years with a further decrease for 1971.

HIGH STREET BATHS:

During the year the old filtration plant was replaced by a new unit which provided more efficient chlorination and filtration and pool heating.

MOSS STREET BATHS:

The pilfering which has been taking place at Moss Street Baths was the main reason for introducing a "Guard All" clothes basket system during 1971. The full effect of this system will not be appreciated until the summer of 1972 but the fact that patrons' clothes will be supervised by a member of the baths staff at all times will ensure that pilfering is kept to a minimum.

METEOROLOGICAL SUMMARY, 1971

Compiled at Hall i'th' Wood Observatory by Vincent C. Smith, Esq., Curator and Meteorologist

1970	Humidity %	Average of Max. and Min. Temp. °F.	Absolute Extremes of Temperature				Sunshine			Monthly Rainfall Inches	Wet days	Fog days at 9 a.m.	Wind
			Highest °F.	Date	Lowest °F.	Date	Monthly Total hours	Most in one day	Date				
January	85	39	57	10	20	4-5	30.5	4.7	10	68.2	19	4	3789
February	85	40	50	4	25	2	53.0	7.8	21	69.0	13	8	3937
March	80	40	35	4-5	25	4-5	72.9	9.7	22	74.5	14	3	3994
April	72	45	66	22	30	27	118.9	13.5	28	65.3	6	1	3200
May	70	52	66	10	32	2	218.7	13.3	14	68.2	11	0	3488
June	72	53	69	11	37	15	143.4	14.2	4	84.2	17	0	3845
July	73	60	80	2	34	2	224.8	15.5	11	59.0	9	1	3225
August	78	59	72	8	42	8	135.1	12.9	25	102.0	16	1	3529
September	81	56	74	8	42	12	155.8	11.2	7	33.4	9	5	2288
October	83	51	69	2	30	14	115.5	9.4	14	118.4	13	6	3672
November	84	42	60	4	23	20	68.2	8.0	9	117.7	18	5	4259
December	85	44	58	20	27	31	16.6	4.4	29	29.9	16	4	4714
TOTAL							1353.4			889.2	161	38	
Monthly Average	79	48					112.8			74.1			

COUNTY BOROUGH OF BOLTON
EDUCATION COMMITTEE



ANNUAL REPORT

OF THE

Principal School
Medical Officer

FOR THE YEAR 1971

A. I. ROSS, M.D , D.P.H.,
Principal School Medical Officer

SCHOOLS SUB-COMMITTEE

Municipal Year 1971-72

THE MAYOR, ALDERMAN A. TOWNEND
ALDERMAN MRS. E. M. RYLEY (Chairman)
COUNCILLOR D. GODBERT (Vice-Chairman)
ALDERMAN C. H. LUCAS
COUNCILLOR T. W. HALL
COUNCILLOR MRS. E. O. HAMER
COUNCILLOR MRS. B. A. HURST
COUNCILLOR J. B. O'HARA
COUNCILLOR J. PARKINSON
COUNCILLOR MRS. D. ROBINSON
COUNCILLOR F. A. RUSHTON
COUNCILLOR R. CARR
COUNCILLOR D. H. WRIGHT

REV. P. V. BREEN (*Co-opted Member*)
REV. D. H. SWANSBURY ,, ,,
REV. C. R. BUTLIN ,, ,,
MR. C. ROBINSON ,, ,,
MR. D. PYE ,, ,,
MISS M. D. HIGGINSON ,, ,,

Health Department,
Civic Centre,
Bolton.

*To the Chairman and Members of the Schools Sub-Committee
of the Bolton Education Committee*

April, 1974, when the National Health Service will be reorganised in a unified administration is rapidly approaching. The following services will be brought together under National Health Service administration:

the hospital and specialist services administered by the Regional Hospital Boards, Hospital Management Committees and Boards of Governors;

the family practitioner services administered by the Executive Councils;

the personal health services administered by local authorities through their health committees;

the school health service;

The White Paper when dealing with the School Health Service states:

“Those providing health services for school children will need to work closely with the hospital service and personal health services for families and children and with education service. Local education authorities’ present responsibilities for school medical and dental services will be transferred to the N.H.S. Local education authorities will remain responsible for the ascertainment and education of children who through handicap or disability need special education. The N.H.S. will make available to local education authorities the advice and medical, dental, nursing and allied resources which they need to discharge these functions, and will give them similar help in such fields as health education and school hygiene. There will be arrangements for joint planning and co-ordination of the two services.

With the fusion of the organisation and management of all the present dental services within the new health authorities, hospital dentists, general dental practitioners and dentists providing services for school-children, children below school age, and expectant and nursing mothers, will be able to work together more closely.”

There are very great advantages in these arrangements. Health services nurses and doctors are responsible for the care of the under fives and later for those who have left school. To have provided a separate organisation outside the main stream of medicine for school children would have led to a deterioration in efficiency. The maintenance of a child’s health runs from birth until it becomes an adult and the school health service cannot operate in isolation. It is important that an effective school health service be maintained. At officer level this will be the responsibility of the Chief Administrative Medical Officers at Area Health Authority. There has been a good relationship between the branches of the Health Service and the School Health Service in Bolton and this is likely to continue.

The school dental service continues to have staffing difficulties. Bolton's water is not fluoridated and as a result children are suffering unnecessary pain and dental caries. Fluoridation is completely safe, inexpensive and the most effective practicable method at present known of improving children's teeth.

Infestation of children's heads with lice was higher than ever last year. The lice had become resistant to the treatment used. At the end of the year a new and much more effective preparation was introduced and it is expected that there will be much less infestation next year.

I should like to thank the staff of the department for their good work during the year, the Chief Education Officer and his staff for their continued co-operation and support, and the members of the Schools Sub-Committee for their interest and enthusiasm for the work of the department.

A handwritten signature in cursive script, reading "A. Ross." with a period at the end.

Principal School Medical Officer

STAFF OF THE SCHOOL HEALTH SERVICE

Principal School Medical Officer ..	Dr. A. I. Ross	
Deputy Principal School Medical Officer	Dr. J. S. Farries	
Senior School Medical Officer	Dr. Audrey Seddon	
School Medical Officers	Dr. Mavis J. Allanson	
	Dr. Dorothy M. Paterson	
	Dr. E. Losonszi	(Resigned 5.8.71)
	Dr. J. Tudor	(Part-time)
	Dr. K. K. Thakar	(Appointed 16.8.71)
		(Resigned 30.11.71)
	Dr. Mira Parikh	(Appointed 13.12.71)
School Medical Officers worked part-time in both the Maternity and Child Health Service and School Health Services and were appointed as Medical Officers and School Medical Officers.		
Ophthalmic Surgeons	Mr. T. Chadderton	(Part-time)
	Mr. T. E. Shannon	(Part-time)
Orthoptist	Mrs. P. Jennison	(Part-time)
		(Appointed 10.11.71)
Ear, Nose and Throat Surgeon ..	Mr. N. H. Mahindraker	
Principal School Dental Officer ..	Mr. S. J. Bray	
Senior School Dental Officer	Mr. W. J. Abbott	
School Dental Officers	Mr. J. G. Whittle	(Part-time)
	Mr. M. R. Annis	(Part-time)
	Mr. I. G. Black	(Part-time)
	Mrs. M. J. Howarth	(Part-time)
		(Resigned 30.7.71)
	Mrs. M. R. McKenna	(Part-time)
	Mr. R. A. Heywood	(Part-time)
		(Appointed 2.8.71)
Dental Anaesthetist	Dr. E. McKenzie-Newton	(Part-time)
Consultant Child Psychiatrist	Dr. M. P. Jonas	(Part-time)
Educational Psychologists	Mr. J. N. Partington	
	Mr. H. W. Marsh	
Speech Therapist.....	Mrs. K. D. Longfield	(Part-time)
		(Resigned 31.12.71)
	Mrs. P. A. Oliver	(Appointed 8.12.71)
Chiropodist	Mr. S. Astley	(Part-time)
Director of Nursing Services	Miss E. M. Richardson	
Area Nursing Officers	Mrs. E. Gallagher	
	Miss A. M. Fraser	

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GENERAL INFORMATION

No. of pupils on registers of maintained schools	27,717+509	Part-time
Children attending:		
Nursery Schools	123+113	Part-time
Primary Schools	17,204+396	Part-time
Secondary Modern Schools (High Schools) ..	6,340	
Secondary Grammar Schools	3,570	
Special Schools	480	
No. of three and four-year old children on the ..		
registers of primary schools	685+396	Part-time
No. of official nursery classes	24	(in Primary Schools only)
No. of schools maintained by the Authority	87	
Nursery Schools	2	
Primary Schools	59	
Secondary Schools	21	
Special Schools	5	

ARRANGEMENTS FOR TREATMENT AND SPECIAL EXAMINATIONS

Minor Ailments:

Consultation and Treatment Sessions - Doctor in Attendance

SCHOOL CLINIC	DAY AND TIME OF COMMENCEMENT	No. OF SESSIONS WEEKLY
Robert Galloway Clinic, Ward Street	Tuesday and Friday, 9.15 a.m.	2
The Withins School Clinic, Withins Lane, Brightmet	Wednesday, 9.15 a.m.	1
Astley Bridge School Clinic, Moss Bank Way	Monday, 9.15 a.m.	1
Halliwell Health Centre	Friday, 2.0 p.m.	1

Minor Ailment Treatment Sessions - Nurse only in Attendance

SCHOOL CLINIC	DAY AND TIME OF COMMENCEMENT	No. OF SESSIONS WEEKLY
Robert Galloway Clinic, Ward Street	Monday to Friday, 9.15 a.m.	5
The Withins School Clinic, Withins Lane, Brightmet	Monday, Wednesday and Friday, 9.15 a.m.	3
Astley Bridge School Clinic, Moss Bank Way	Monday, 9.15 a.m.	1
Sessions finish at 10.30 a.m.		
Halliwell Health Centre, Moss Street	Monday to Friday, 10.30 - 11.30 a.m.	5

Treatment Centres with only a school nurse in attendance were conducted at the following school:-

Hayward	Monday, Wednesday and Friday morning, 11 a.m. - 12.30 p.m.
-----------------	--

Dental Surgeries:

Five Dental surgeries were in operation as follows:
ROBERT GALLOWAY CLINIC 2 Surgeries
Monday to Friday 9.30 a.m. to 2 p.m.

HALLIWELL HEALTH CENTRE: . .
Monday - Friday, 9.30 a.m. and 2 p.m. 1 Surgery
Monday and Friday, 9.30 a.m. and 2 p.m. }
Tuesday, Wednesday, Thursday, 9.30 a.m. } 1 Surgery

ASTLEY BRIDGE HEALTH CENTRE
Monday to Friday, 9.30 a.m. and 2 p.m. 1 Surgery

Aural Clinics:

The Consultant Aural Surgeon attended weekly at the Robert Galloway Clinic to see by appointment school children who were referred by the school medical officers.

Ophthalmic Clinics:

The Consultant Ophthalmic Surgeons attended at the Robert Galloway Clinic to examine by appointment children referred by school medical officers.

The clinics were held as follows:
Monday afternoon }
Wednesday afternoon } 3 sessions weekly
Thursday afternoon }
Friday afternoon } 1 session weekly

Morning sessions commenced at 9 a.m. and afternoon sessions at 2 p.m.

Speech Therapy:

At the beginning of 1971 one part-time speech therapist was employed. A second speech therapist commenced in December, 1971.

Audiometry:

Routine audiometric testing continued to be carried out in schools. Routine testing is carried out as soon as possible after school entry, and in the last year at primary school. In addition to the routine testing, full examination is carried out on children who have speech defects, or may be backward, or who are specially referred for any reason.

Enuresis Clinics:

Nocturnal enuresis has been defined by Myra Sim, Lecturer in Psychiatry, University of Birmingham (1969) as the wetting of the bed by a child over the age of 3 years.

Ninety of these children are found to be free of organic disease but are less susceptible to stimuli during sleep.

A general practitioner - Nichols - has defined two personality groups:

- 1. The timid and apprehensive - though often intelligent.
- 2. The madcaps or tomboys over - exerting themselves physically and mentally. These are often defiant and misinterpret attempts at control as lack of love.

Experience at the Bolton Clinic confirms these views.

Children ordinarily, do not reach the clinic until the age of 6 years. They have had no treatment for 3 years - or their general practitioner has been unsuccessful in treatment by medicines and tablets.

We use an electronic alarm unit - price £6 - with varying degrees of success.

Some of our failures are due to parents not persevering with the unit. Other parents do not trust the alarm unit - although these units have been used since 1938.

Various excuses are advanced - the bell wakes the household but not the patient or "The alarm is defective".

Strangely enough the alleged defective apparatus is rarely returned so that other patients may try it out!

Some parents apparently regard the apparatus as a sort of fetish - to prevent the condition becoming worse.

Nocturnal enuresis affects children from all social groups. A survey made in Newcastle on Tyne, 1960, showed that it occurred in 9·8% of 5 year olds.

Owing to the increasing stresses of modern living I would estimate the percentage is now higher, so we shall have to re-double our efforts to help these children.

Reference:

"Guide to Psychiatry" by Myra Sim, Published E. & S. Livingstone Ltd. 1969.

A summary of the work of the enuresis clinic during the past four years is given below:

	1968	1969	1970	1971
No. of children seen ..	204	160	153	127
No. of new patients ..	146	98	97	85
No. cured	74	50	68	45
No. under treatment at end				
of year	58	36	42	45

Ultra Violet Light Treatment:

Ultra violet light therapy was available in the Health Department on the same basis as in previous years. Children may receive this treatment on the recommendation of school medical officers.

Breathing Exercises:

The physiotherapist in the Health Department continued to give instruction in breathing exercises for children recommended by school medical officers, chest physicians and the aural surgeon. She also attended Lostock Open Air School to give instruction in breathing exercises to children at the school.

MEDICAL INSPECTION OF SCHOOL CHILDREN

A greater percentage of parents were present at school medical examinations than at any other time in the past ten years. Part of this improvement is due to the extension of selective medical examinations; by this means special attention can be given to those children with known health problems.

Year	No. of pupils inspected	No. with parents present	Percentage of children with parent present
1962	7,361	4,235	57.5
1963	6,658	3,342	50.2
1964	7,256	3,773	51.9
1965	6,425	3,497	54.5
1966	7,792	4,684	60.1
1967	4,779	2,029	42.5
1968	5,914	2,224	37.6
1969	5,526	2,983	54.0
1970	6,499	3,022	46.5
1971	4,237	2,606	61.5

Primary School Leavers

Number of children selected and examined	880
Number of children with eye defects	142
Number of children with hearing loss	16
Number of children not selected for examination	1,565
Number of children with eye defects	188
Number of children with hearing loss	65
Number of children selected but absent at examination	6

Periodic Medical Inspections

The total number of periodic medical inspections carried out in 1971 was 4,237 a decrease on the number carried out in 1970, namely 6,499.

Number of children inspected:

Entrants	2,539
Primary School Leavers (Selective examinations)	880
Senior Leavers	476
Total	3,859
Additional periodic inspections (including Special Schools)	342
GRAND TOTAL	4,237

Other Examinations

Special examinations	1,579
Re-inspections	1,032
TOTAL	2,611

RESULT OF INSPECTIONS

Periodic Inspections

The number of defects requiring treatment found at periodic inspections was 1,476 compared with 1,968 in 1970. The number of cases requiring observation was 1,996 in 1971 and 1,949 in 1970.

Defect or Disease	Periodic Inspections						TOTAL	
	Entrants		Leavers		Others—			
					Primary School Leavers	Additional periodic inspections and Special Schools		
	Re- quiring treat- ment	Re- quiring observ- ation	Re- quiring treat- ment	Re- quiring observ- ation	Re- quiring treat- ment	Re- quiring observ- ation	Re- quiring treat- ment	Re- quiring observ- ation
Skin	52	27	14	1	28	17	94	45
Eyes:								
a. Vision . .	138	130	102	13	206	36	446	179
b. Squint . .	65	13	3	—	28	5	96	18
c. Other . .	6	3	—	14	7	2	13	19
Ears:								
a. Hearing . .	19	128	3	4	75	100	97	232
b. Otitis Media	13	67	6	2	18	28	37	97
c. Other . .	20	26	1	—	12	11	33	37
Nose and Throat	136	227	7	4	63	73	206	304
Speech	22	99	—	2	24	55	46	156
Lymphatic Glands	14	111	—	1	2	15	16	127
Heart	9	17	1	—	2	8	12	25
Lungs	44	57	3	14	28	18	75	89
Developmental:								
a. Hernia . .	3	9	—	—	3	5	6	14
b. Other . .	60	96	4	7	67	29	131	132
Orthopaedic:								
a. Posture . .	3	17	1	—	5	7	9	24
b. Feet	12	34	4	1	19	16	35	51
c. Other . .	9	24	6	4	12	7	27	35
Nervous System:								
a. Epilepsy . .	2	3	2	2	10	6	14	11
b. Other . .	3	16	1	6	12	20	16	42
Psychological:								
a. Development	4	60	—	5	8	168	12	228
b. Stability . .	6	43	—	1	8	31	16	75
Abdomen	8	18	3	1	5	15	16	34
Other	6	9	5	3	12	9	23	21
TOTALS	656	1234	166	85	654	677	1476	1996

Summary of Pupils found to require Treatment

Age Group Inspected (By year of birth)	For defective vision (excluding squint)	For any of the other conditions recorded in previous table	Total individual pupils
1967 and later	10	64	68
1966	63	170	210
1965	78	217	259
1964	24	23	43
1963	15	12	20
1962	5	12	15
1961	94	216	258
1960	42	92	113
1959	6	7	12
1958	1	0	1
1957	24	29	50
1956 and earlier	78	53	109
TOTALS	440	885	1,158

Special Inspections

The following table shows the number of defects found at special inspections

Defect or Disease	Special Inspections	
	Requiring Treatment	Requiring to be kept under observation
Skin	240	—
Eyes:		
(a) Vision	51	—
(b) Squint	1	—
(c) Other	14	—
Ears:		
(a) Hearing	119	7
(b) Otitis Media	9	—
(c) Other	9	1
Nose and Throat	60	4
Speech	32	2
Lymphatic Glands	3	—
Heart	7	1
Lungs	19	—
Developmental:		
(a) Hernia	4	—
(b) Other	9	2
Orthopaedic:		
(a) Posture	—	—
(b) Feet	9	1
(c) Other	36	2
Nervous System:		
(a) Epilepsy	2	—
(b) Other	32	—
Psychological:		
(a) Development	21	1
(b) Stability	45	5
Abdomen	—	—
Other	12	1
TOTALS	734	27

Presence of Parents at Periodic Medical Inspections:

Age Group Inspected	No. of pupils inspected	No. with parent present
Entrants	2,539	1,874
Primary School Leavers (Selective examination)	880	418
Senior Leavers	476	28
Additional periodic inspections (including Special Schools)	342	286
TOTALS	4,237	2,606

Visits to homes of children by school nurses:

The number of home visits paid by school nurses was 149, compared with 134 in 1970. These visits continued to be made for the same reasons as in the past; some were in connection with the cleansing of children who were found to be infested with vermin and some were made in connection with failure to attend clinics held either by the local authority or at the hospital.

MINOR AILMENTS

Over the years there has been a considerable decrease in attendances at the minor ailment clinics, 4,463 children attending in 1971 compared with 9,498 in 1963. This reflects the general improvement in health and nutritional standards of children and better utilisation of the health services.

There is still a need for this type of clinic for those children who would not normally be taken to their general practitioner by parents for such conditions as impetigo. Early emotional and behaviour difficulties can sometimes be identified at these clinics in the early stages.

Clinic or Centre	No. of individual children who attended	Children seen by medical officer on first visit	No. of subsequent visits to medical officer	Children seen by nurse on first visit	No. of subsequent visits to nurse	Total No. of Attendances
Robert Galloway	1,097	483	79	612	1,040	2,214
The Withins . .	303	173	45	306	746	1,270
Astley Bridge . .	174	108	44	74	88	314
Halliwell Health Centre	152	104	2	114	—	220
Treatment Centre	382	—	—	382	63	445
TOTALS . .	2,108	868	170	1,488	1,937	4,463

NOTES ON SPECIFIC DEFECTS

Diseases of the Skin:

There was a considerable fall in the number of cases of scabies with fewer children being treated for the condition since 1964.

Year	Number of cases treated
1960	4
1961	15
1962	26
1963	46
1964	112
1965	115
1966	179
1967	154
1968	181
1969	146
1970	243
1971	95

The improvement is due to more effective treatment with the traditional remedy, benzyl benzoate, being replaced by gamma benzene hexachloride.

Two cases of ringworm of the scalp were discovered during the year.

Disease	Number of cases treated or under treatment by the Authority
Ringworm:	
(i) Scalp	2
(ii) Body	4
Scabies	95
Impetigo	34
Other skin diseases	116
TOTAL	251

Impetigo treated in School Clinics:

The number of cases of impetigo treated in school was 34 in 1971, compared with 51 in 1970. The table below gives the figures for the past ten years. The condition is not usually the cause of exclusion from school unless the site is liable to allow spread to other pupils or if the lesions are very extensive.

Year	No. of Cases	Year	No. of Cases
1962	33	1967	26
1963	16	1968	154
1964	17	1969	55
1965	27	1970	51
1966	19	1971	34

Defects of the Ear, Nose and Throat:

A total of 322 children had their tonsils and adenoids removed during the year, 13 had operations for diseases of the ear, 12 for other nose and throat conditions and 60 received other forms of aural treatment. Two hundred and two of these children were seen by the Aural Surgeon and referred to hospital for treatment, and 285 were referred direct to the hospital.

Treatment	
	Number of cases known to have been dealt with
Received operative treatment—	
for diseases of the ear	13
for adenoids and chronic tonsillitis . .	322
for other nose and throat conditions . .	12
Received other forms of treatment	60
TOTAL	407

Mr. N. H. Mahindrakar, the Consultant Aural Surgeon, Reports:

"The Otolaryngology (E.N.T.) Clinic was held at Robert Galloway Clinic once a week when children referred by the School Medical Officers were seen.

A rather conservative attitude was taken towards the surgical management of recurrent tonsillitis and deafness caused by fluid in the middle ear. This necessitated regular follow up of cases which in the past were subjected to surgery; hence there has been an inevitable increase in the number of cases seen in the clinic and the length of the waiting time.

Deafness in children remains the biggest problem encountered in these clinics. The news of the possibility of appointing a peripatetic teacher for Bolton is welcome with great sighs of relief.

I am grateful to the staff at the Robert Galloway Clinic for their help and co-operation in the running of the clinics. My thanks are also due to Dr. A. I. Ross for his every co-operation and help in the smooth running of these clinics."

Ear, Nose and Throat Clinics

No. of visits by patients	534
No. of patients attending	415
No of new patients	331
No. of children referred from periodic inspection . .	240
No. of children referred from school clinics	151

Children attending the clinics for the first time were seen for the following conditions, which may have been multiple in any particular child:

Disease or Defect	Referred from—			TOTAL
	Periodic Inspection	School Clinics	Other Sources	
Deafness	94	80	13	187
Otitis Media	7	7	2	16
Tonsil and adenoid abnormalities	118	54	8	180
Catarrhal Conditions	2	—	—	2
Other conditions	18	11	1	30
TOTALS	239	152	24	415

The aural surgeon completed prescriptions for hearing aids in respect of 5 children.

Pure Tone Audiometric Testing:

The early ascertainment of deafness in children is extremely important and the health visitors carry out screening tests for the ascertainment of deafness in pre-school children or as part of the work undertaken by the Health Department.

The following table shows the number of children in various age groups tested at schools and tested at clinics.

Sweep Testing in Schools

Sources of Children tested	Tested			Failed Test		
	Boys	Girls	Total	Boys	Girls	Total
Primary Schools:						
Entrants	708	666	1,374	75	79	154
Leavers	1,325	1,120	2,445	103	110	213
TOTALS	2,033	1,786	3,819	178	189	367

Full Testing at the Clinics

Source of Reference	No. of children referred for test	App't net kept for test	Result of Audiogram		Unsatisfactory Audiograms and Recommendations				
			Satis-factory	Un-satis-factory	Change of position in class	For obser-vation	Repeat audio-gram	Treat-ment at the clinic	To Aural Sur-geon
Failed sweep test in school ..	367	29	81	257	—	74	102	6	75
School Medical Officers ..	209	12	52	145	—	91	31	1	22
School Medical Officers on account of speech defect	64	13	35	16	—	13	2	—	1
On account of backwardness	3	—	1	2	—	2	—	—	—
Others:									
Aural Surgeon	68	10	20	38	—	9	5	1	23
Headmaster	20	6	8	6	—	3	1	—	2
Parent. . . .	47	11	7	29	—	14	5	—	10
Family Doctor	47	10	13	24	—	17	3	1	3
Health Visitor	12	2	5	5	—	4	1	—	—
Repeat Audio-grams	226	16	76	134	—	63	28	1	42
TOTALS ..	1,063	109	298	656	—	290	178	10	178

Diseases of the Eye:

Altogether, 1,669 children are known to have been dealt with for errors of refraction. Of these, 1,635 were refracted by the ophthalmic surgeon at the school clinics. The total attendances at the clinics numbered 3,191 of which 1,938 were for refraction, repairs to glasses and re-examinations and 11 for diseases of the eye.

Fifty-one children were referred to hospital services.

In 302 cases spectacles were repaired or replaced.

Fifty-two children were referred to the ophthalmic clinic at the Bolton Royal Infirmary for treatment for squint.

Mr. T. E. Shannon, Consultant Ophthalmologist attending at the Robert Galloway Clinic, reports:

‘The work of the Robert Galloway Ophthalmic Clinic has been carried out during the past year with its usual efficiency, thanks to the nursing and clerical staff and to the parents for their attendance and co-operation.

We have been referring children with squint to the Orthoptist at the Bolton Royal Infirmary, but with the appointment of a part-time Orthoptist it is hoped that some of this work will be done in the new Deansgate Health Centre”.

Mr. T. Chadderton, Consultant Ophthalmic Surgeon attending at the Robert Galloway Clinic, reports:

“The Clinics have continued to run smoothly. We are looking forward to working in the new Health Centre in Deansgate, and especially to the appointment of Mrs. P. Jennison, the Orthoptist, who with her assistant will screen the children in the schools and carry out orthoptic treatment. This should help us to provide a full Ophthalmic service. I would like to thank the staff, nursing and clerical, who have helped so much in the smooth working of the clinics”.

	Number of cases known to have been dealt with
External and other conditions excluding errors of refraction and squint	63
Errors of refraction (including squint) ..	1,635
TOTAL	1,698
Number of pupils for whom spectacles were prescribed	914

The following were found at periodic medical inspection to require attention for defects of the eye.

Defect	Age Groups Inspected				Totals
	Entrants	Primary School Leavers	Senior School Leavers	Additional Periodic Inspections and Special Schools	
Defective Vision	138	136	103	70	447
Squint	65	14	3	14	96
Blepharitis ..	1	—	—	—	1
Conjunctivitis ..	—	1	—	—	1
Other	5	4	—	1	10

Orthoptics:

An orthoptist commenced part-time duties (4 sessions a week) in November, 1971, and her duties are to screen young children for visual defect with special emphasis in the discovery of strabismus (Squint). Those children who subsequently need further observation are followed up by the orthoptist at the ophthalmic clinic.

Defective Colour Vision:

As in previous years, the colour vision of secondary school leavers has been tested using the Ishihara method. In 1971, 25 boys were found to have defective colour vision, compared with 35 boys and 1 girl in 1970.

Orthopaedic Defects:

One hundred and forty-five children were found to have orthopaedic defects. Ninety-seven of these were found at periodical and special medical inspections and the remaining 48 at school clinics. Sixteen children were referred to consultant orthopaedic surgeons at the Royal Infirmary for advice and treatment.

Chiropody:

Three sessions weekly were held by the chiropodist at the Robert Galloway Clinic.

Mr. S. Astley, the Chiropodist, reports:

“The number of children attending the clinic has been steadily increasing. A smooth running clinic has always been maintained however, due to efficient organisation from all the staff”.

The number of children attending the clinic, and a summary of defects treated, are given below.

	BOYS	GIRLS
Number of new patients who attended the clinic	198	271

Defects Treated:

Plantar warts	165	265
Hallux Valgus	5	15
Onychocriptosis (ingrowing toe nails)	6	2
General chiropody (corns, callosities, general advice, etc.)	21	41
Incorrect footwear	28%	29%
Total number of individual treatments..	2,738	

Cleanliness of School Children:

The percentage of children with infested heads in 1971 was 12·16, compared with 8·7% in 1970.

The actual number of children with nits was the highest recorded since the war. Many of these children were concentrated at schools where it appears that the parental standards of hygiene are inadequate. This causes considerable concern to parents who take adequate measures to keep their children clean and it is most unpleasant for the teaching staff to work under these conditions.

Towards the end of the year a more effective method of treating head lice was introduced and it is hoped that this will produce a considerable fall both in the number of cases of pediculosis and the children who need to be excluded from school for the condition.

One hundred and seventy-one children attended the Municipal Medical Baths at School Hill for vermin.

Notices to Cleanse were issued under Section 54(2) of the Education Act in 498 cases, compared with 480 in 1970. Cleansing Orders under Section 54(3) of the Education Act were issued in 102 cases.

	1967	1968	1969	1970	1971
School Population	25,077 + 316 part time	25,521 +395 part time	26,128 +450 part time	26,941 +492 part-time	27,717 +509 part-time
No. of head inspections.. . . .	60,833	55,768	66,204	68,245	61,517
No. of children with nits	2,129	1,838	2,121	2,410	3,532
Expressed as a percentage of school population	8.3	7.1	7.9	8.7	12.16

THE GENERAL CONDITION OF SCHOOL CHILDREN

Result of Routine Medical Inspection:

At the routine medical inspections, the school medical officer concludes his medical report with a statement on the child's general condition, whether satisfactory or unsatisfactory. This classification, which was adopted nationally from the 1st January, 1956, has the merits of simplicity and practicability.

Of the 4,327 children examined at periodic inspections, were satisfactory. Details are given in the following table.

Age Groups Inspected (By year of birth) (1)	No. of Pupils inspected (2)	Physical Condition of Pupils Inspected	
		Satisfactory (3)	Unsatisfactory (4)
1967 and later	456	456	—
1966	1,015	1,015	—
1965	1,068	1,068	—
1964	142	142	—
1963	79	79	—
1962	59	59	—
1961	593	593	—
1960	287	287	—
1959	46	46	—
1958	16	16	—
1957	179	179	—
1956 and earlier	297	297	—
TOTALS	4,237	4,237	—

Education (Milk) Act, 1971:

PROVISION OF MILK IN SCHOOLS:

From September milk could only be given to children of junior school age if a school medical officer certified that this was required on medical grounds.

Head teachers, health visitors and social workers, submitted the names of children who might require milk on medical grounds, and these children were examined in school by the school medical officers, who issued certificates for the supply of milk, in appropriate cases, for periods of one or two years.

No. of schools visited	53
No. of children examined	818
No. of certificates issued for one year	622
No. of certificates issued for two years	78

The School Meals and Milk in Schools Scheme:

Daily average number of children (entitled to free milk on grounds of age) taking milk - Autumn Term, 1971	6,685
Daily average number of children taking free school milk at special schools - Autumn Term, 1971	187
Number of children entitled to free school milk on health grounds at 31.12.71	700
Number of dinners produced in the school kitchens during 1971	3,502,402
Average number of children taking meals daily	16,325
Percentage of school children taking dinners in school 1971, expressed as percentage of average attendances	65.6%
No. of central kitchens	2
No. of kitchen/dining rooms	60
No. of children on free meals list at 31st December	3,681

IMMUNISATION

Immunisation against diphtheria, tetanus and poliomyelitis continued on the same lines as in 1970.

Children are offered a booster injection against diphtheria and tetanus and a booster dose of oral poliomyelitis vaccine on entry to school at 5 years of age. Where parental consent is given for the immunisation to be given in school the immunisation records are checked and the parent is notified of the course of immunisation recommended.

No. of children who received a "booster" injection against diphtheria and tetanus	1,092
No. of children who received a "booster" dose of poliomyelitis vaccine	1,079
No. of children who received first injection against diphtheria and tetanus	248
No. of children who received first dose of poliomyelitis vaccine	248

Parents are notified of the date when any further immunisation is due. Where practical, and by arrangement with the head teacher, this is given in school. Thirty four children completed a primary course of immunisation against diphtheria, tetanus and poliomyelitis.

Immunisation against Rubella:

When this was introduced in 1970, it was offered to girls born between 1.9.56 and 31.8.59. Because supplies of vaccine were restricted, the vaccination was limited to girls in their fourteenth year, which included those born between 1.9.56 and 31.3.58.

In 1971 vaccine was available for the remainder of the girls in this age group. The number of girls who were immunised in school was 1,911.

Ten girls attended their general practitioner for immunisation, making a total of 1,921.

This protection is now offered to girls in their first year at secondary school, and the parents of 870 girls gave consent for immunisation. This will be given in schools in 1972.

B.C.G. Vaccination of School Children:

School children in their thirteenth year were offered B.C.G. vaccination against tuberculosis. Those whose parents give consent are skin tested and the negative reactors are given B.C.G. vaccination. A summary of this work is given in the following table:

Total No. of consents received	1,992
No. of children skin test	1,823*
No. absent for skin test	163
No. absent for reading	97
No. found positive	150
(Mildly positive reaction - 109	
Strongly positive reaction - 41)	
No. found negative	1,576
No. given B.C.G.	1,576
*Includes some children tested twice - at school and at absentee session.	

Of the 1992 children whose parents gave consent, 125 were found to have had B.C.G vaccination previously and were not, therefore, included in the scheme. The majority of these were immigrant children who were given the vaccination in their own country.

Those children who gave strongly positive reactions to tuberculin tests were given appointments for follow-up X-ray at the Chest Clinic. No new cases of tuberculosis were found.

DENTAL HYGIENE

Report of the Principal School Dental Officer

Staff: (Establishment of 8 full time officers):

Whilst no major change occurred in the school dental service during 1971 a similar pattern to the previous year was apparent. Two full time officers and four part time officers were in post, amounting in all, to the equivalent of 3½ full time officers. One part time female officer left for domestic reasons, another part time officer took post graduate courses at Manchester and Liverpool dental hospitals and later in the year gained a further qualification from the Royal College of Surgeons at London.

Recruitment:

It has become noticeable throughout the country of the diminution of full time officers for local authority services, coupled with an increasing difficulty in recruitment. We had no applicants to our advertisements for full time dentists but we did appoint a part time officer in August. Unfortunately this officer was ill for 2 months and was unable to help the service substantially until he recovered.

Clinics:

1. ROBERT GALLOWAY - 2 surgeries available, both open throughout, but one on a part time basis.

2. HALLIWELL HEALTH CENTRE - 2 surgeries available, both open throughout, but one on a part time basis.

3. ASTLEY BRIDGE - A single surgery unit, open on a part-time basis.

4. WITHINS - 1 surgery unit closed throughout the year.

5. DEANE - 1 surgery unit closed throughout the year.

6. CANNON STREET HEALTH CENTRE - This new centre was opened in September and although a single surgery unit was planned and built into it, no new dental apparatus was installed because of staff shortages.

Dental Inspections:

It has always been accepted as a principle in the school dental service that annual dental inspections followed by treatment for those who accepted it was a minimum standard only and that every effort should be made to reduce that period. The inspection interval in the Bolton service has remained at best a 12 monthly period with the primary and special schools taking priority. Some children attending special schools have been inspected more than once during the year. Grammar school pupils and some in technical schools have not been inspected in school but this does not debar pupils who apply or are referred from inspection and treatment at the clinic. The total number of inspections during the year was 14,491 and of these 3,500 were done in the clinics. Many children inspected in school fail to accept treatment when offered, especially the older ones, who may have their own dentist and every encouragement is given to continue that arrangement. Others use the family dentist as an excuse and present themselves as casual emergencies at a later date. Others fail to keep appointments when sent for.

Treatment:

Post graduate courses, sickness and changes have reflected to some extent in the returns of treatment for this year. The number of courses of treatment commenced during the year was 4,664 and of these 4,044 courses were completed. The children made 11,477 attendances for treatment and had a total of 6,007 fillings, of which 3,620 were in permanent teeth and 2,387 in deciduous teeth. The total number of teeth extracted was 5,569, of which 3,836 were deciduous teeth and 1,733 permanent teeth. I have previously mentioned the high proportion of children who have overcrowded mouths and whose jaws cannot accommodate their teeth without irregularity. It is in these mouths that some permanent teeth have to be extracted according to a definite plan which allows the remaining teeth to space out, so that after several months, the teeth align themselves with little or no evidence of the extractions. This is in addition to removing grossly carious teeth for the relief of pain for the large number of emergency patients which in Bolton, is well over the national average and due to several factors, i.e., shortage of dental staff in this service and in the town generally, excessive consumption of confectionery and lack of fluoride in the water supplies. A deterioration in the dental condition of the immigrant children is noted this year, particularly in the younger age groups. This may be due to dietary changes. The ratio of permanent teeth saved to permanent teeth extracted is approximately 2:1. General anaesthetics were administered for 2,131 children and 104 children had teeth X-rayed. Children needing orthodontic treatment, other than by extraction, were supplied with 85 removable appliances and 64 children had their treatment completed in the year. Accidents to front permanent incisor teeth resulted in 10 teeth having root treatments, and crowns fitted to them. Under the heading of other operations are included dressings for the temporary relief of pain, opening of abscesses, treatment for septic gums, arrest of haemorrhage after extractions, removal of stitches, desensitising sore teeth, taking impressions for study models and general mouth prophylaxis. It is regretted that 1,320 appointments were not kept during the year.

Inspections:

(a) First inspection in school	10,340
(b) First inspection in clinic	3,500
(c) Reinspection in school or clinic	651
No. of (a) and (b) found to require treatment	8,859
No. of (c) found to require treatment	556
No. of (a) and (b) offered treatment	7,685
No. of (a), (b) and (c) offered treatment	8,222

Attendances and Treatment:

	Ages 5 - 9	Ages 10 - 14	Ages 15 & over	Total
First visits	2,267	1,653	319	4,239
Subsequent visits	2,162	2,373	527	5,062
	<u>4,429</u>	<u>4,026</u>	<u>846</u>	<u>9,301</u>

	Ages 5 - 9	Ages 10 - 14	Ages 15 & over	Total
Additional courses of treatment commenced ..	251	134	40	425
Total courses commenced ..	2,518	1,787	359	4,664
Courses completed	4,044
Fillings in permanent teeth	490	2,448	682	3,620
Fillings in deciduous teeth	2,172	215	—	2,387
Permanent teeth extracted ..	483	1,072	178	1,733
Deciduous teeth extracted ..	2,948	888	—	3,836
General anaesthetics	1,286	752	93	2,131
Emergencies	1,321	867	179	2,367
No. of pupils X-rayed	104	
Prophylaxis	371	
Teeth otherwise conserved	288	
Teeth root filled	10	
Crowns	11	

Orthodontics:

New cases	61
Cases complete	64
Cases discontinued	13
No. of removable appliances	85
No. of fixed appliances	1
Cases referred to consultant	2

Prosthetics:

	Ages 5 - 9	Ages 10 - 14	Ages 15 & over	Total
Pupils supplied with dentures	2	5	6	13
No. of dentures supplied	2	5	8	15

Anaesthetics:

Administered by dental officers	733
Administered by part time anaesthetist	1,398

Sessions:

Devoted to treatment	1,386
Devoted to inspection in school	51
Devoted to dental health education	16

Dental Health Education:

We are indebted to the health education officer, nurses and teachers for their assistance in this important aspect of our work. The main focus has been to primary and nursery school children by talks and leaflets, demonstrating the deleterious effects of frequent sugary liquids and foods on developing teeth. Talks at the chairside to mothers and children continued throughout the year, emphasising the value of good wholesome diets coupled with a high standard of dental care and hygiene. We can only hope the message goes home. In our present state of knowledge fluoridated water supply is the only proven way of substantially reducing dental decay.

The dental staff record their appreciation of the help received from the Chairman and members of the Education Committee, from the Principal School Medical Officer and his staff and especially from head teachers and their staffs for encouragement in dental health education for the children.

Fluoridation:

Results coming through from areas in this country which have had the addition of fluoride to water supplies for several years are fully in accord with the findings in America and other parts of the world and show a dramatic fall in the number of decayed teeth amongst young school children. A general medical practitioner who worked in Bolton 8 - 10 years ago and then moved to the North East of England (to a fluoridated area) was so impressed by the improvement of his children's teeth that he appeared on a film called "The Natural Way", to give his personal account of his young family's dental improvement which he could only attribute to the fluoridated water supply.

INFECTIOUS DISEASES IN CHILDREN

There were fewer infectious diseases notified in school children than at any other time in this century and this was largely due to the fall in cases of measles. Only 46 children were notified as having this disease, of these only 9 were school children. Vaccination against measles was introduced in 1968 and there has been a considerable drop in the number of cases when figures for two successive years are considered (the disease being more manifest in alternate years when the number of susceptible children starts to build up.) This is shown by the figures in the following table.

Year	No. of children with measles	Two year total
1960	1,058	3,756
1961	2,698	
1962	572	2,754
1963	2,182	
1964	884	2,457
1965	1,573	
1966	1,416	2,067
1967	651	
1968	551	869
1969	318	
1970	1,276	1,322
1971	46	

Two cases of poliomyelitis were notified in the year in pre-school children, but one subsequently was diagnosed as having infective polyneuritis. It was noted that few of the contacts of this child have been immunised against poliomyelitis, but happily, no further cases of the disease developed.

Only 3 of the 26 cases of meningococcal meningitis were in children of school age and as it was felt that the source of infection was in the home no special measures were taken for the school contacts of these 3 children. A course of Sulphonamide was given to the family contacts and it was hoped to contain the disease by such action.

There were no special outbreaks of infectious disease with the exception of a moderate number of cases of scarlet fever being notified from one school in the late Spring.

Incidence of Infection:

The number of cases of infectious diseases each month was as follows :

Disease	Number of Cases												Total
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	
Scarlet Fever	6	10	15	17	5	8	6	8	1	6	1	-	83
Measles	3	6	3	5	4	3	8	1	6	4	-	3	46
Whooping Cough ..	10	4	2	1	-	3	5	1	5	4	-	-	35
Enteric Fever (Paratyphoid B) ..	-	-	-	-	-	-	-	-	-	-	-	-	-
Dysentery	2	1	-	-	1	-	2	-	-	1	-	-	7
Food Poisoning	2	-	1	-	-	-	2	1	1	-	-	-	7
Diphtheria	-	-	-	-	-	-	-	-	-	-	-	-	-
Meningitis:													
Meningococcal ..	-	5	5	1	2	2	5	2	1	-	1	2	26
Other	1	2	-	2	-	-	2	1	-	-	1	-	9
Acute Encephalitis ..	-	-	-	-	-	-	-	-	-	-	-	-	-
Infective Jaundice ..	-	2	3	-	-	-	-	1	1	1	1	-	9
Polio (Paralytic) ..	-	-	2	-	-	-	-	-	-	-	-	-	2

Age of Infection:

The age of the children at infection is shown below :

Disease	Age															Total	
	Un- der 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14		15
Scarlet Fever	—	1	1	9	10	23	16	7	5	3	3	—	4	—	1	—	83
Measles	8	10	5	6	7	3	3	2	1	—	—	—	—	—	—	1	46
Whooping Cough ..	3	5	7	5	6	3	5	1	—	—	—	—	—	—	—	—	35
Enteric Fever (Paratyphoid B) ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery	—	1	1	1	1	2	1	—	—	—	—	—	—	—	—	—	7
Food Poisoning ..	—	1	2	1	2	—	—	1	—	—	—	—	—	—	—	—	7
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Meningitis:																	
Meningoccal ..	10	4	3	4	2	—	—	1	—	—	—	—	—	2	—	—	26
Other .. .	2	1	2	1	—	2	1	—	—	—	—	—	—	—	—	—	9
Acute Encephalitis ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Infective Jaundice ..	—	—	2	—	—	1	2	1	—	1	—	—	—	2	—	—	9
Polio (Paralytic) ..	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	2

REPORT ON PHYSICAL EDUCATION

The activities which come under the umbrella of Physical Education are continually on the increase in number and in variety and children are having the opportunity of sampling these and choosing a sport which may well continue in after-school life.

In February, a party of 176 children and staff from the Secondary Schools in Bolton, took part in a Ski Tour to Einsiedeln, Switzerland. As there was a demand for a further Ski Course negotiations were started for one to Austria in 1972.

The Bolton Schools Cross Country Championships were held at Leverhulme Park in March.

Swimming has played a major part in the programme, many awards have been granted for Life Saving and Personal Survival and the school baths were extensively used for instruction during the holidays. The swimming season of instruction at the public baths was extended to Christmas. In December the Salford Hundred Tests took place at Moss Street Baths.

The Physical Education Association meetings have been well attended by teachers and so have the demonstrations of Infant and Junior physical education which were held in March and November at SS. Simon and Jude's Church of England School and St. Patrick's Roman Catholic County Primary School respectively.

Several in-service training courses have been held, including A.S.A. Teachers Certificate Course, Basketball, Netball for Primary Teachers, Association Football Coaching Course, Archery Courses and a Life Saving Course for Teachers.

CHILD GUIDANCE CENTRE

From 1st January to 31st December, 1971

No. of new cases referred	56
Cases still outstanding brought forward from 1970	32
	<hr/>
	88
	<hr/>
New cases seen during the year	67
Cases transferred to Bolton District General Hospital	3
Number still outstanding at the end of the year ..	8
Number of cases closed but not seen	10
	<hr/>
	88
	<hr/>

Sources of Referral:

Consultants	3
School Medical Officers	48
General Practitioners	5

Recommendations:

School for Educationally Sub-Normal Children (Residential)	1
School for Maladjusted Children (Residential) ..	4
Firwood School	1
Lady Tong Children's Unit	3
No. of children discharged from the clinic	63
No. of children in treatment at 31st December, 1971	89

Child Guidance Clinic: (Report provided by Dr. M. P. Jonas, Consultant Child Psychiatrist).

There has been an increase both in the number of new cases seen at the clinic and in the number of cases in treatment during this year. The majority of referrals are filtered via the School Psychological Service with the co-operation of the School Medical Officers. I feel that children under 7 and children whose parents have psychiatric disturbances should be given some priority in referral.

There is still a great lack of day facilities for emotionally disturbed children in Bolton and it is hoped that this lack will be remedied in the near future, as this would reduce the need for children to be placed in residential schools for maladjusted and enable them to continue in their own community.

During the year Dr. Mason regrettably had to discontinue her sessions with the clinic, thus reducing the total psychiatric sessions available to three a week. I contribute two sessions and Dr. Gopal one session a week to the service.

The addition to the staff of Mr. Marsh, Educational Psychologist, and Miss Eagar and Miss Blundell, Social Workers, has been very welcome and has meant that more cases can be dealt with by the Child Guidance Service.

Close liaison with the Local Authority service and the Hospital is maintained.

Staffing:

Just as 1970 saw changes of staff at the Child Guidance Centre, 1971 has seen increase in numbers and consolidation.

Mr. H. W. Marsh joined the staff as Educational Psychologist in August, 1971, after his year's course at Birmingham, this meaning that since August there have been two full-time Educational Psychologists operating in the Education Department for the first time in the history of the Service.

The Education Authority has also been fortunate to obtain the services of two full-time Social Workers, Miss E. Blundell and Miss J. Eagar, both of whom were appointed from 1st September, 1971. Mrs. B. Richards who had been contributing 4 sessions a week as Psychiatric Social Worker, left to put into practice child-rearing techniques of her own. We wish her all the best. Mrs. M. Clark's appointment as temporary part-time Social Worker also came to an end.

Even though the staffing has increased, Parkinson's Law has seemed to operate on the calls that the Service is required to undertake.

School Psychological Service:

The majority of the work of the Child Guidance Centre is within the School Psychological Service.

During the year 246 new referrals were made, compared with 147 the previous year. In addition there were 25 cases re-referred, as well as the many on-going cases. Table 1 gives statistics and comparisons with 1970 and 1969.

Table 2 indicates the source of referral to the School Psychological Service. It can be seen that there has been a considerable increase in the number of children referred, especially by parents. We consider it an essential feature of the School Psychological Service that there is an open referral system and parents have direct access to the Service.

Table 3 indicates the reasons for referral, this showing the increase in the number of behaviour problems referred to the Service.

Table 4 gives the age distribution of the children referred. It is very significant that there has been a large increase in the age group below 7 years. With a large proportion of children of this age, the earlier the child's problem can be diagnosed and treated the better, although provision for helping children at this age is limited.

The number of children seen as new cases or re-referrals during the year was 217 compared with 95 in 1970. As previously the follow-up of children constitutes an essential feature of the work of the Service.

With the increase in staffing much more “in-depth” work and advice can be attempted with both child and parents, but this is hampered considerably by the lack of any day provision for children with emotional problems. The burden of coping with these children falls very heavily on the ordinary teacher in the ordinary school, when placement in a small class or unit with a specialist teacher, if achieved early enough, could alleviate many of the subsequent problems, and reduce the need for eventual residential placements.

The small Adjustment Class still continues to flourish on a part-time basis and this will be remaining temporarily at the Robert Galloway Clinic building when the Child Guidance Centre moves into its new accommodation at the Deansgate Health Centre at New Year, 1972. It is to be hoped that suitable accommodation can be found for this class when the old building is demolished.

It is hoped to increase the size and function of the Observation Class during 1972, and to provide increased facilities for dealing with the infant child's presenting problems.

With the long needed absorption of Firwood School into the Education system, this has also placed more demands on the School Psychological Service.

Child Guidance Clinic:

A report on the Child Guidance Clinic is given by Dr. Jonas, Consultant Child Psychiatrist. The Educational Psychologists have been contributing two sessions each to this Clinic, with the Social Workers contributing three sessions each per week during 1971.

Remedial Service:

This Service is completely peripatetic now, with 33 groups operating at the end of the year, 20 in Junior Schools and 13 in Secondary Schools. This indicates expansion at the Junior School level and 19 Junior Schools are now catered for.

There is still a considerable need to lower the onset of remedial help becoming available to children in need of this. At the present time children are only able to receive help from the end of the first year in the Junior School. A very strong case can be argued for children, who are failing, to receive help in both reading and language experience in the top infants age range.

SCHOOL PSYCHOLOGICAL SERVICE

TABLE 1

	1971	1970	1969
No. of children referred during year	246	147	153
No. of children re-referred during year	25	(no separate figures)	
No. of children dealt with during year	217	95	125
No. of children on waiting list (31st December)	214	170	168

TABLE 2

Referring Agencies

Referred by	No. of Cases	
	1971	1970
Head Teachers	118	65
School Medical Officers	31	15
Remedial Teaching Service	47	49
Parents	31	5
Education Welfare Officer	8	2
Chief Education Officer	16	7
Speech Therapist	2	1
Psychiatrist	6	1
Paediatrician	7	2
Social Services	4	0
Juvenile Liaison	1	0
TOTAL	271	147

TABLE 3

Reasons for Referral

Reason given by Referring Agency	No. of Cases	
	1971	1970
Backwardness	105	88
Behaviour Problems	59	24
Assessment	56	20
Stealing and Lying	5	6
School Phobia	10	3
Learning Problems	2	2
School Transfer	9	1
Advice	13	1
Truanting	11	2

TABLE 4

Age Distribution of Children Referred and Re-referred

Age in years	Under 5	5 - 7	8 - 10	11 - 15	15.
No. of children 1971	14	76	109	69	3
No. of children 1970	8	25	96	33	3

HANDICAPPED PUPILS

One of the most important duties of the School Health Service is to advise the authority on the ascertainment of handicapped pupils. These are pupils who, because of some physical or mental disability, require special educational treatment if they are to obtain the maximum possible advantage from education. Correct ascertainment and placement is of considerable importance to individual pupils.

As far as possible, children are retained in ordinary schools unless their handicap is so severe that this would not give the child the best possible education.

The examination of children who are ascertained as educationally sub-normal is carried out by medical officers who have attended a prescribed course in this work and have fulfilled regulations laid down in The Medical Examination (Sub-normal Children) Regulations, 1959. At the beginning of the year two full-time medical officers and two-part-time medical officers having fulfilled the requirements of the regulations, were able to undertake this work.

Ascertainment in 1971

The following children were ascertained as in need of special educational treatment as handicapped pupils during the year:

Blind	2
Physically handicapped	7
Partially sighted	3
Partially hearing	4
Delicate	18
Educationally sub-normal	46
Maladjusted	7
Pupils suffering from speech defects	72
Deaf	1
Epileptic	1
Total	<u>161</u>

Children in Special Schools:

At the end of the year there were 426 handicapped pupils receiving special educational treatment in the special schools. Details are given in the following table.

HANDICAP	SPECIAL SCHOOL	NO. OF PUPILS	
		BOARDERS	DAY
BLIND	Condoover Hall, Shrewsbury	1	—
	Henshaw's School, Harrogate	1	—
	Wavertree, Liverpool	4	—
	Royal Normal College, Shrewsbury	1	—
	Sunshine House, Southport	1	—

		NO. OF PUPILS	
		BOARDERS	DAY
PARTIALLY SIGHTED	Corporation Park, Blackburn	—	6
	Fulwood, Preston	1	—
DEAF	Hamilton Lodge, Brighton	1	—
	Thomasson Memorial, Bolton	—	8
	Mary Hare Grammar	1	—
PARTIALLY HEARING	Thomasson Memorial, Bolton	1	17
DELICATE	Lostock Open Air, Bolton	57	—
EDUCATIONALLY SUB-NORMAL	Firwood, Bolton	—	76
	Woodside, Bolton	—	176
	Bostock Hall, Cheshire	2	—
	Capenhurst Grange, Cheshire	1	—
	Crookhey Hall, Cockerham	2	—
	Crowthorne School, Edgworth	7	—
	Eden Grove, Westmorland	2	—
	Peild Heath House, Middlesex	2	—
	Thingwall, Liverpool	1	—
SEVERELY SUB-NORMAL	Woodlands School, Deganwy	2	—
	Linn Moor, Aberdeen	1	—
AUTISTIC	Wargrave House, Cheshire	1	—
	Maghull Homes	1	—
MALADJUSTED	Bladon House, Staffs	1	—
	Bramfield House, Halesworth	2	—
	Burnt Norton, Chipping Campden	1	—
	Chaigley, Thelwall	1	—
	Dawlish College, Exeter	1	—
	Dennington College, Barnstaple	1	—
	Farney Close, Sussex	1	—
	Highfield School, Worsley	3	—
	Ledrick Muir, Kinross	1	—
	Philpots Manor, West Hoathly	1	—
	Pitt House, Torquay	2	—
	Salesian School, Longhope	1	—
	William Henry Smith, Brighouse	1	—
	Knowl View, Rochdale	11	—

		NO. OF PUPILS	
		BOARDERS	DAY
PHYSICALLY HANDICAPPED	Birtenshaw Hall, Bromley Cross ..	1	12
	Bleasdale House, Silverdale	1	—
	Corporation Park P/H Unit	—	2
	Keppleway, Broughton-in-Furness	2	—
	Singleton Hall, Blackpool.. ..	3	—
	Margaret Barclay, Mobberley	1	—
	Mere Oaks, Standish	—	1
	Thomas de la Rue, Tonbridge ..	1	—
TOTALS		128	298
TOTALS		426	

Children awaiting placement in Special Schools:

The following pupils were ascertained in need of special educational treatment, but at the end of the year arrangements for accommodation had not been completed.

Physically handicapped	3
Blind	1
Educationally sub-normal			5
Maladjusted	4
Partially sighted	1
Epileptic	1
Delicate	3
					TOTAL	..	18

Total number receiving or awaiting special school accommodation .. 368

Special Schools in Bolton:

WOODSIDE DAY SPECIAL SCHOOLS FOR EDUCATIONALLY SUB-NORMAL CHILDREN:

The number of children on the rolls, and those admitted and discharged were as follows:

WOODSIDE SENIOR SCHOOL:

From the Bolton Area:

	BOYS	GIRLS
No. of children on the roll, December, 1971 ..	37	49
No. of children admitted during 1971	9	9
No. of children who left during 1971.. ..	12	8

From Outside Areas:

No. of children on the roll, December, 1971	6	5
No. of children admitted during 1971	2	—
No. of children who left during 1971.. ..	3	1

WOODSIDE JUNIOR SCHOOL:**BOYS****GIRLS****From the Bolton Area:**

No. of children on the roll, December, 1971	49	41
No. of children admitted during 1971	15	13
No. of children who left during 1971.. ..	13	11

From Outside Areas:

No. of children on the roll, December, 1971..	2	2
No. of children admitted during 1971	2	—
No. of children who left during 1971.. ..	2	1

One of the medical officers who is approved for the purpose of ascertaining educationally sub-normal children attends these schools regularly.

Children leaving Woodside Senior School at the age of 16 years who are thought to require further supervision are reported informally to the local health authority.

Firwood Special School:

(Formerly FIRWOOD TRAINING CENTRE)
For educationally sub-normal children

	BOYS	GIRLS
No. of children on the roll, December, 1971 ..	43	33
No. of children admitted during 1971	5	6
No. of children discharged during 1971	6	4

THOMASSON MEMORIAL DAY AND RESIDENTIAL SPECIAL SCHOOL FOR DEAF AND PARTIALLY HEARING CHILDREN:

The Thomasson Memorial School continues to do good work amongst partially hearing children from the County Borough and also from other authorities' areas. There are a number of deaf children from Bolton attending the school. With a few exceptions, the children who lived in Bolton or nearby attended as day scholars; the remainder were resident.

The Consultant Aural Surgeon pays regular visits to the school. A school medical officer also paid regular visits. There is a good link with the Manchester Department of Audiology and Education of the Deaf. A start is soon to be made on parent guidance to help the parents of children suffering from deafness.

The numbers of children were:

From the Bolton area:

	BOYS	GIRLS
No. of children on the roll, December, 1971 ..	13	13
No. of children admitted during 1971	3	3
No. of children who left during 1971	1	1

From Outside Areas:		BOYS	GIRLS
No. of children on the roll, December, 1971 ..		56	36
No. of children admitted during 1971		8	11
No. of children who left during 1971		6	1

LOSTOCK RESIDENTIAL OPEN AIR SCHOOL FOR DELICATE CHILDREN:

The open air school continued on the same lines as in previous years. During 1971, 70 children in the school were from the Bolton area and 42 from outside areas, principally Lancashire County. This compared with 86 children from Bolton and 44 from outside areas in 1970.

The school continues to be useful for children suffering from a variety of conditions and, apart from general debility, asthma is the principal single entity concerned.

A school medical officer visits the school each week, and the children are cared for by a local practitioner when they are ill.

The following table gives details of the number of children in attendance, admitted and discharged during the year.

From the Bolton Area:		BOYS	GIRLS
No. of children on the roll, December, 1971 ..		30	27
No. of children admitted during 1971		10	7
No. of children discharged during 1971		5	8

From Outside Areas:			
No. of children on the roll, December, 1971 ..	19	6	
No. of children admitted during 1971	13	7	
No. of children who left during 1971	11	7	

An analysis of the medical conditions of the children who were in residence during the year is given below:

MEDICAL CONDITION	NO. OF CHILDREN	
	BOLTON	OUTSIDE AREAS
Asthma	13	20
Bronchitis	17	4
Delicate	7	—
General debility	25	3
Other conditions	8	15
	<hr/>	<hr/>
	70	42
	<hr/>	<hr/>

Children in other Special Schools:

A number of Bolton children who are handicapped and who cannot be suitably educated in the special schools provided in Bolton attend residential schools in other parts of the country. These children are examined by the authority's medical officers during the school holidays when they return to Bolton so that progress can be assessed, and if there is any change in the child's disability an appropriate recommendation can be made.

Children suffering from Cerebral Palsy:

As far as possible, spastic children whose physical disability is slight and whose intelligence level is adequate are encouraged to attend an ordinary school. The majority of spastic children from Bolton whose physical disability makes them unfit for ordinary school attend Birtenshaw Hall Special School for Spastic Children. The admission and discharge of these children is the responsibility of the Medical Advisory Panel, which meets from time to time to consider applications.

Altogether there were 29 children known to the School Health Service to be suffering from cerebral palsy. The situation at the end of the year was as follows:-

	BOYS	GIRLS
Attending Birtenshaw Hall Special School ..	8	5
Attending special school for delicate children ..	—	1
Attending residential special school	1	—
Attending ordinary schools	10	2
Not at school - pre-school children	1	1
	—	—
	20	9
	==	==

Children unable to attend school:

The service of home teachers was needed for 38 children. The conditions necessitating this service were as follows:-

	BOYS	GIRLS
Maladjusted	3	1
Lung infection	1	—
In plaster	5	2
Arthritis	—	1
Thalidomide	1	—
Asthma	1	1
E.S.N.	—	2
Heart condition	1	1
Epileptic	—	1
Operations	1	1
Osteomyelitis	1	—
In calipers	1	—
Other conditions	9	4
	—	—
	24	14
	==	==

Seventeen boys and twelve girls who had suffered from conditions mentioned below were taken off the peripatetic teachers list:-

RESUMED ATTENDANCE AT ORDINARY SCHOOL	BOYS	GIRLS
Maladjusted	2	1
In plaster	5	2
Thalidomide	1	—
Asthma	—	1
E.S.N.	—	1
Heart condition	—	1
Epileptic	—	1
Operations	—	1
In calipers	1	—
Other conditions	7	4
ADMITTED TO SPECIAL SCHOOL:		
Maladjusted	1	—
	<hr/>	<hr/>
	17	12
	<hr/>	<hr/>

Co-operation with the Youth Employment Service:

Handicapped pupils may encounter difficulties in obtaining or keeping employment after they leave school and to assist the Youth Employment Officers in placing these children school medical officers provide advice on Forms Y.9 or Y.10 which are sent to the Youth Employment Officer.

FORM Y.9

This form was completed in respect of 62 children and was used for children who had relatively minor defects and who were not likely to need registration under the Disabled Persons (Employment) Act, 1944. The conditions for which the form was used are given in the following table:

	BOYS	GIRLS
Defective colour vision	25	—
Defective hearing	2	1
Defective vision	2	1
Epilepsy	3	3
Heart condition	2	—
Respiratory conditions	14	4
Other conditions	2	3
	<hr/>	<hr/>
	50	12
	<hr/>	<hr/>

FORM Y.10

This form is used where children are sufficiently severely handicapped to make a registration under the Disabled Persons (Employment) Act, 1944, a possibility. In 1971 this form was issued in respect of 4 children, compared with 3 in 1970. These children attended residential special schools.

This form is not completed unless the parent is willing to sign a declaration stating that the nature of the disability may be revealed to the Youth Employment Officer. Generally speaking, it is to the advantage of the child that the handicap should be declared at this stage as failure to do so may lead to unsuitable employment and, eventually, to unemployment.

Leavers from—	Form Y.9 completed for—			Form Y.10 completed for—		
	Boys	Girls	Total	Boys	Girls	Total
Secondary Modern Schools ..	48	10	58	—	—	—
Art School	—	—	—	—	—	—
Grammar Schools	—	—	—	—	—	—
Special Schools	2	2	4	—	—	—
Residential Special Schools ..	—	—	—	2	2	4
Out of School	—	—	—	—	—	—
TOTALS	50	12	62	2	2	4

Speech Therapy:

Mrs. K. D. Longfield, who had been a part-time speech therapist at the Robert Galloway Clinic, resigned at the end of the year. Two full-time speech therapists were appointed, one commenced in December and a senior speech therapist was due to commence duty early the following year.

A therapist treats children with disorders or abnormalities of speech or language, i.e., speech problems caused by deafness, cleft palate, brain damage, mental retardation, bilingualism. There have also been many stammerers and clutterers referred in 1971, especially in the 10 - 16 age group. Dyslalics, ranging from mild lisps to severe total unintelligibility make up quite a large proportion of the children referred.

Most children attend every week for sessions of 20 to 60 minutes, depending on the type of problem. Other children attend at longer intervals of one, three or six months. The number of children in this category has increased because of the growing numbers waiting to be seen, limited time is spent on advising parents (of older dyslalic children or children with retarded language) on do-it-yourself techniques to improve the child's speech at home. This experiment has continued to be a success with the majority of these selected cases. Unfortunately, most types of speech problem cannot be helped in this way and need specialised treatment and parental advice weekly, or daily in ideal conditions.

One session a week was spent at Woodside Junior School where about one third of the children requiring therapy were able to be treated. It has been impossible to provide sessions for Woodside Senior School, Firwood Special School, Thomasson Memorial School and Lever Edge Lane Observation Class because of lack of staff.

A student from the Elizabeth Gaskell College of Education attended one session weekly to observe treatment and to learn about the general running of the speech therapy centre.

No. of children seen weekly	48
No. of new children interviewed (including Wood-side Junior School)	49
No. of children discharged	112

Of the children discharged -

- 60% were remedied treatment cases
- 10% left school or left Bolton in most cases before they could be seen
- 15% defaulted
- 15% were referred to the speech therapist at the Bolton Royal Infirmary for early treatment

No. of children on general waiting list (excluding all special schools)	207
No. of children on urgent waiting list	55
No. of children put on supervision	60

EXAMINATIONS UNDER SECTIONS 34 AND 57 OF THE EDUCATION ACT, 1944

Approved medical officers of the authority carried out examinations under the above sections of the Education Act, 1944 of children who were not making satisfactory progress at school. In 27 cases it was recommended that the children be ascertained as educationally sub-normal and that special educational treatment should be provided.

ADDITIONAL REPORTS

Psyiotherapy:

ULTRA-VIOLET LIGHT TREATMENT:

As from January, 1971, two sessions of ultra-violet light treatment per week were given on Tuesdays and Fridays. Due to fewer children being recommended for treatment it was still possible to treat pre-school and school children together. During the year 1971, 45 children attended for 584 treatments.

The conditions for which the medical officers recommended children for treatment are shown in the following table:

Asthma	2
General Debility	5
Coughs and colds	15
Bronchitis	6
Anaemia	2
Nasal Catarrh	4
Throat infections	2
Underweight	1
Genu Varum	1
Genu Valgum	2
Others	5
									<hr/>
									45
									<hr/>

One child only was sent for breathing exercises. These exercises followed the child's ultra-violet light session. Altogether the child received 16 treatments.

Lostock Open Air School:

The physiotherapist restarted ultra-violet light sessions at the school in October, 1971. Due to the school being extended it was impossible to give the ultra-violet light before this date.

During October and December 20 children at 8 sessions received 121 treatments.

As from January, 1971, the children at Lostock Open Air School received physiotherapy treatment one afternoon per week. The treatments included postural drainage, foot exercises, abdominal exercises and breathing exercises. The children were treated individually except for the breathing exercises which were taken in a class.

No. of patients	135
No. of new patients	12
No. of sessions	29
No. of treatments	520

Firwood School:

The children at Firwood received physiotherapy treatment one morning per week. Each child received individual treatment.

No. of patients	88
No. of new patients	6
No. of sessions	30
No. of treatments	172

Various Physiotherapy Conditions:

Details of Children’s Section

Twenty-five children (16 boys and 9 girls) were recommended for treatment by the medical officers.

	BOYS	GIRLS
Inversion of feet	5	4
Re-education of walking following factured right tibia	1	—
Hypotonia	1	—
Injury right ankle	—	1
Rheumatoid Arthritis	—	1
Right torticolles	1	—
Cerebral Vascular Accident	1	—
Genu Valgum	1	2
Pes Planus	2	—
Correction in walking	1	—
Pulled left groin muscles	—	1
Eversion of feet	1	—
Spasticity of lower limbs	1	—
Mild clumsy child	1	—
	<hr/> 16 <hr/>	<hr/> 9 <hr/>

The treatments were all carried out by a qualified physiotherapist.

Mortality in School Children:

Nine children of school age (five boys and four girls) died during the year. Two deaths were due to natural causes, one was due to a drowning accident and six were the result of injuries.

School Health Education:

In 1971 the majority of health education work was carried out in schools. Unfortunately owing to the absence of a Health Education Officer, from August, 1971, onwards, it was not possible to carry out the health education programme that had been planned for the new academic year starting in the autumn.

During the year, seven health visitors taught the British Red Cross mothercraft syllabus in schools, leading to an examination with a diploma for successful candidates. One health visitor taught at a grammar school as part of a course called "You and Society", which covered individual and community health.

The Health Education Officer gave talks at 4 grammar schools, 8 high schools and 3 colleges of higher education during the year. These talks were emphasised by the use of appropriate films and because of the particular vulnerability of school leavers, the main topics covered were sex education, drugs, smoking and health, and sexually transmitted diseases.

One primary school received a talk on dental health. There is a great need for more health education to be done in primary schools, and in the earlier years of secondary school life, as these are the most formative years and it is possible to convey correct health habits, and to prepare children for their pubescence. There are 52 primary schools in the present County Borough of Bolton and while there is only one person to do this specialist work, we can only offer a very limited service to the town's primary schools.

THE CARE OF CHILDREN ATTENDING NURSERY SCHOOLS, NURSERY CLASSES AND SPECIAL SCHOOLS

Nursery Schools:

School medical officers made visits to Kay Street Nursery School, Pikes Lane Nursery School and other nursery classes, throughout the year. The school nurse made monthly visits to the nursery schools.

Nursery Classes:

Medical examinations of new admissions were carried out at the 24 nursery classes.

Special Schools:

Monthly visits were paid by school medical officers to Woodside School, and weekly visits to Lostock Open Air School. The Consultant Aural Surgeon visits Thomasson Memorial Special School periodically through the year.

Results of Periodic Medical Inspection at Special Schools:

Defect or Disease	Special Schools			
	WOODSIDE (E.S.N.)		THOMASSON MEMORIAL (Deaf & Partially Hearing)	
	Requiring treatment	Requiring observation	Requiring treatment	Requiring observation
SKIN	6	2	-	-
EYES:				
Defective vision	26	6	3	4
Squint	6	1	4	-
Other	1	-	-	-
EARS:				
Defective hearing	4	3	-	30
Otitis media	-	1	1	5
Other	1	4	-	-
NOSE AND THROAT:				
Tonsils and adenoids	2	10	1	3
Other	-	-	-	-
SPEECH ABNORMALITIES	8	4	-	30
LYMPHATIC GLANDS	-	3	-	1
HEART	1	1	-	-
LUNGS	4	-	-	-
DEVELOPMENTAL:				
Hernia	-	5	-	-
Other	4	-	-	-
ORTHOPAEDIC:				
Posture	-	3	1	-
Flat Feet	2	-	-	-
Other	3	3	1	-
NERVOUS SYSTEM:				
Epilepsy	3	1	-	1
Other	3	1	1	1
PSYCHOLOGICAL:				
Development	-	121	-	1
Stability	-	1	-	-
OTHER DEFECTS OR DISEASES	1	3	-	-
TOTALS ..	75	173	12	76

EMPLOYMENT OF CHILDREN

Two hundred and ninety-five children were examined for employment outside school hours.

The type of employment was as follows:

	No. of CHILDREN
Newspaper delivery	253
Shop or Store Assistants	27
General Duties	6
Entertainments	3
Milk Delivery	6
	<hr/> 295 <hr/>

